

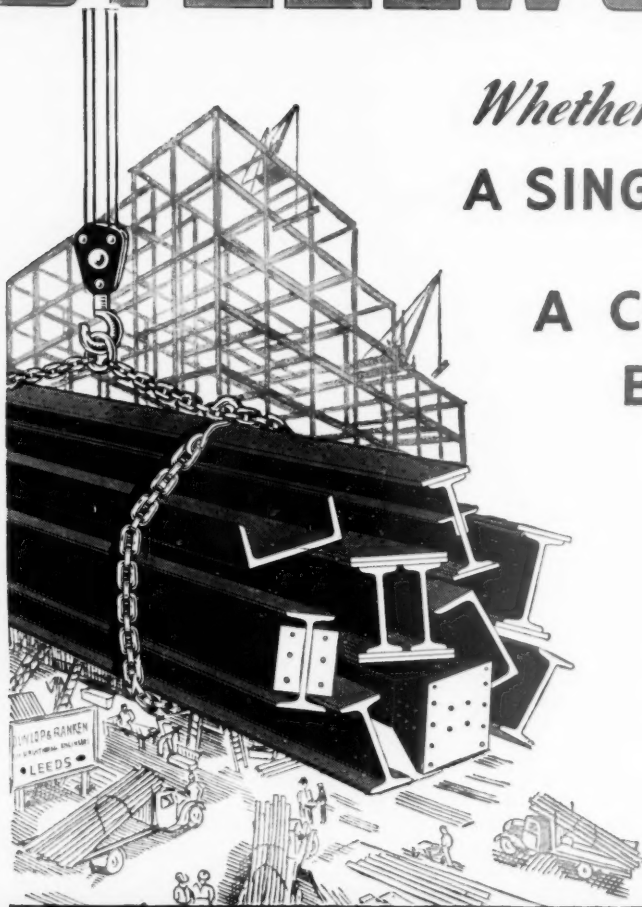
THE ARCHITECT & BUILDING NEWS

IN THIS ISSUE

- CHILDREN'S CLINIC, BERGEN
- NEW SHOWROOM, ST. GEORGE'S STREET, W.1
- NEWS OF THE BUILDING INDUSTRY

APRIL 13, 1951 · VOL. 199 · NO. 4295 · ONE SHILLING WEEKLY

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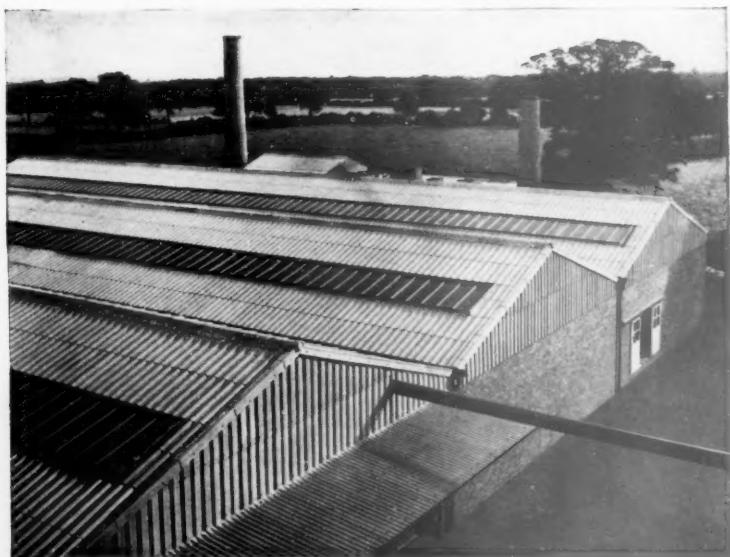
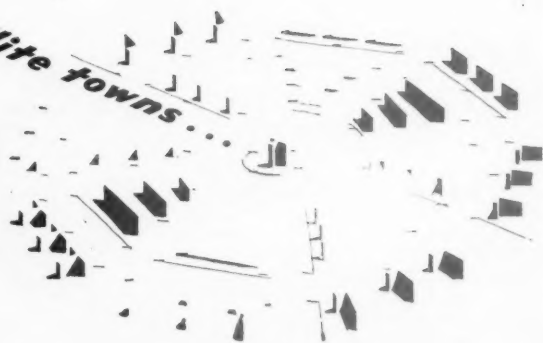
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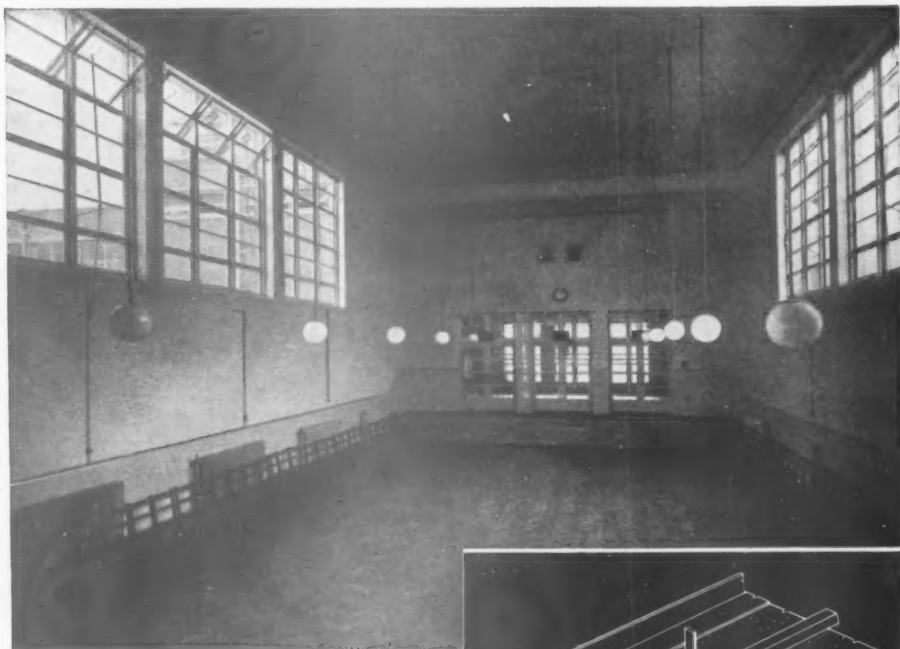
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CNC 7

Lloyd Concealed

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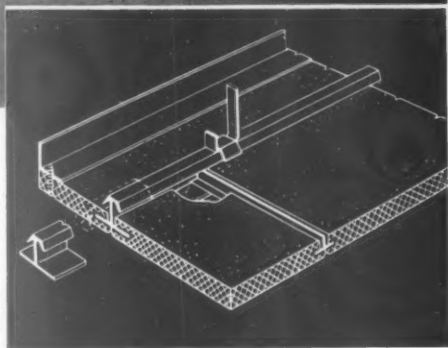


Colmers Farm Secondary Modern School, Birmingham.
Architects: Harrison & Cox.

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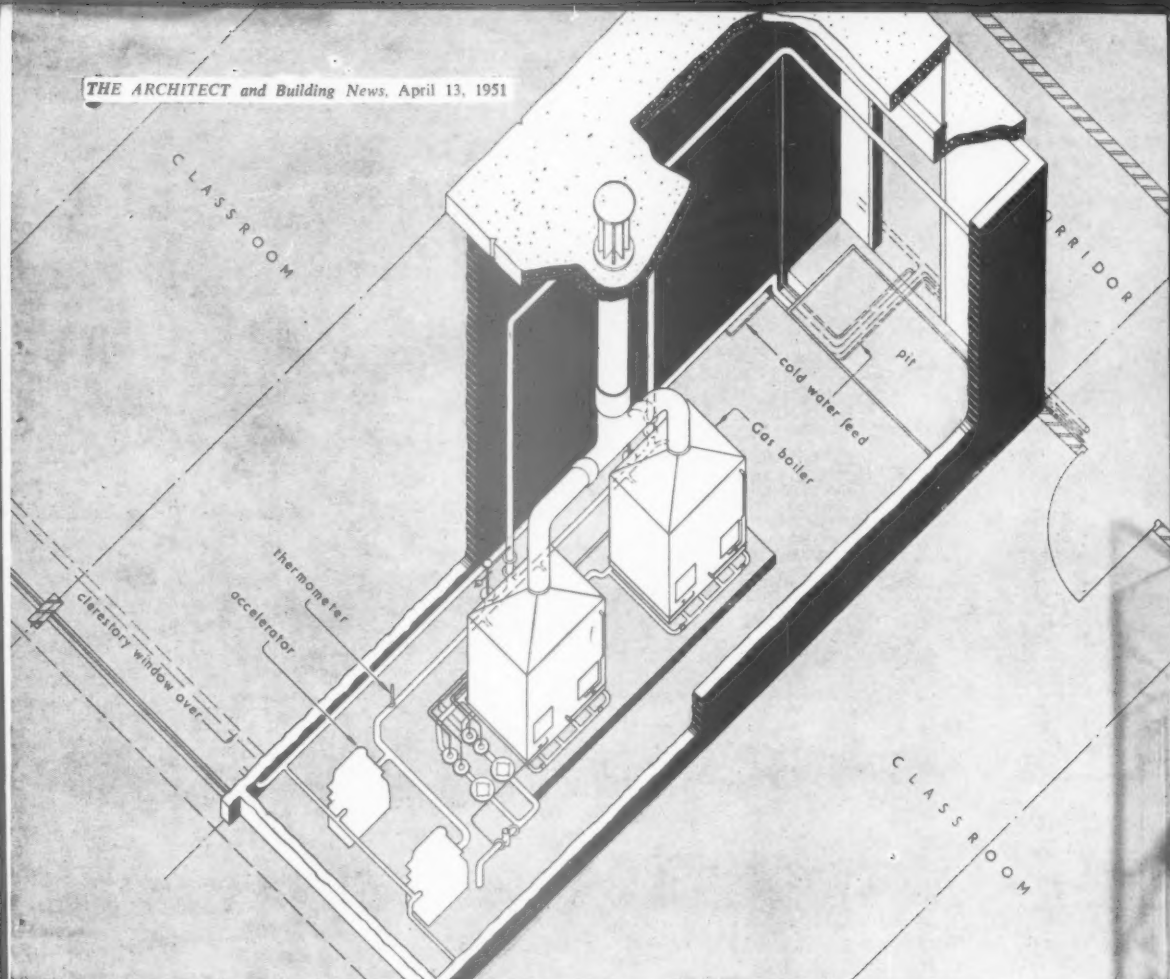
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Boiler house for New Classroom Block, Twickenham Technical College. County Architect: C. G. Stillman, F.R.I.B.A.

GAS solved this school heating problem

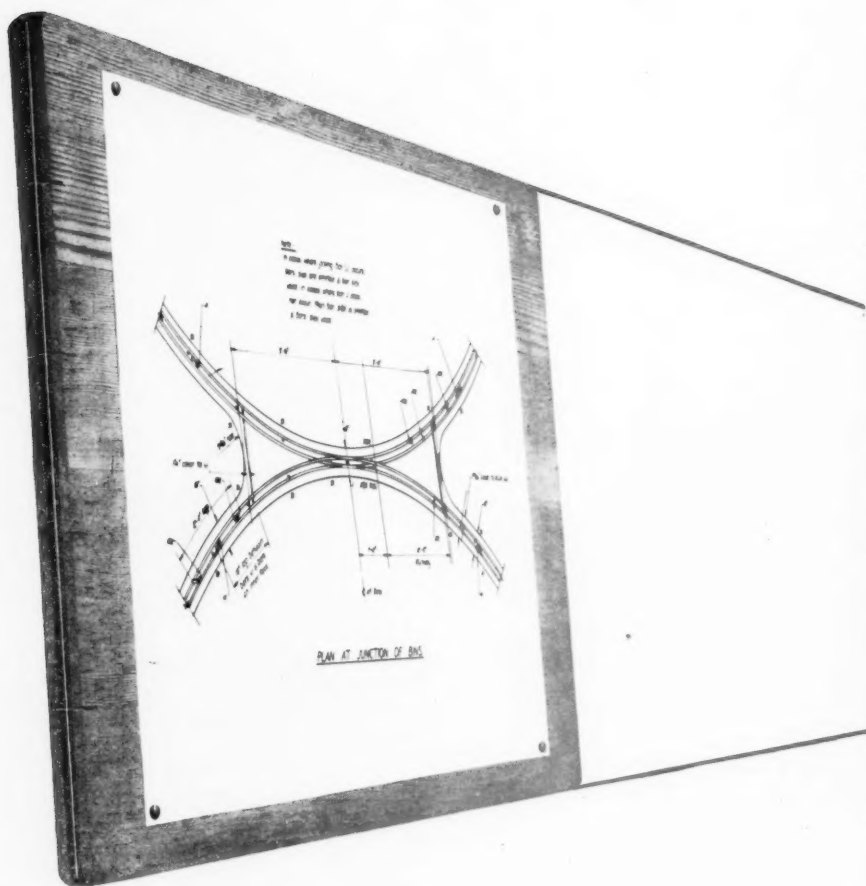
Gas-fired low pressure central heating is installed in this most recent extension to Twickenham Technical College, opened in 1948.

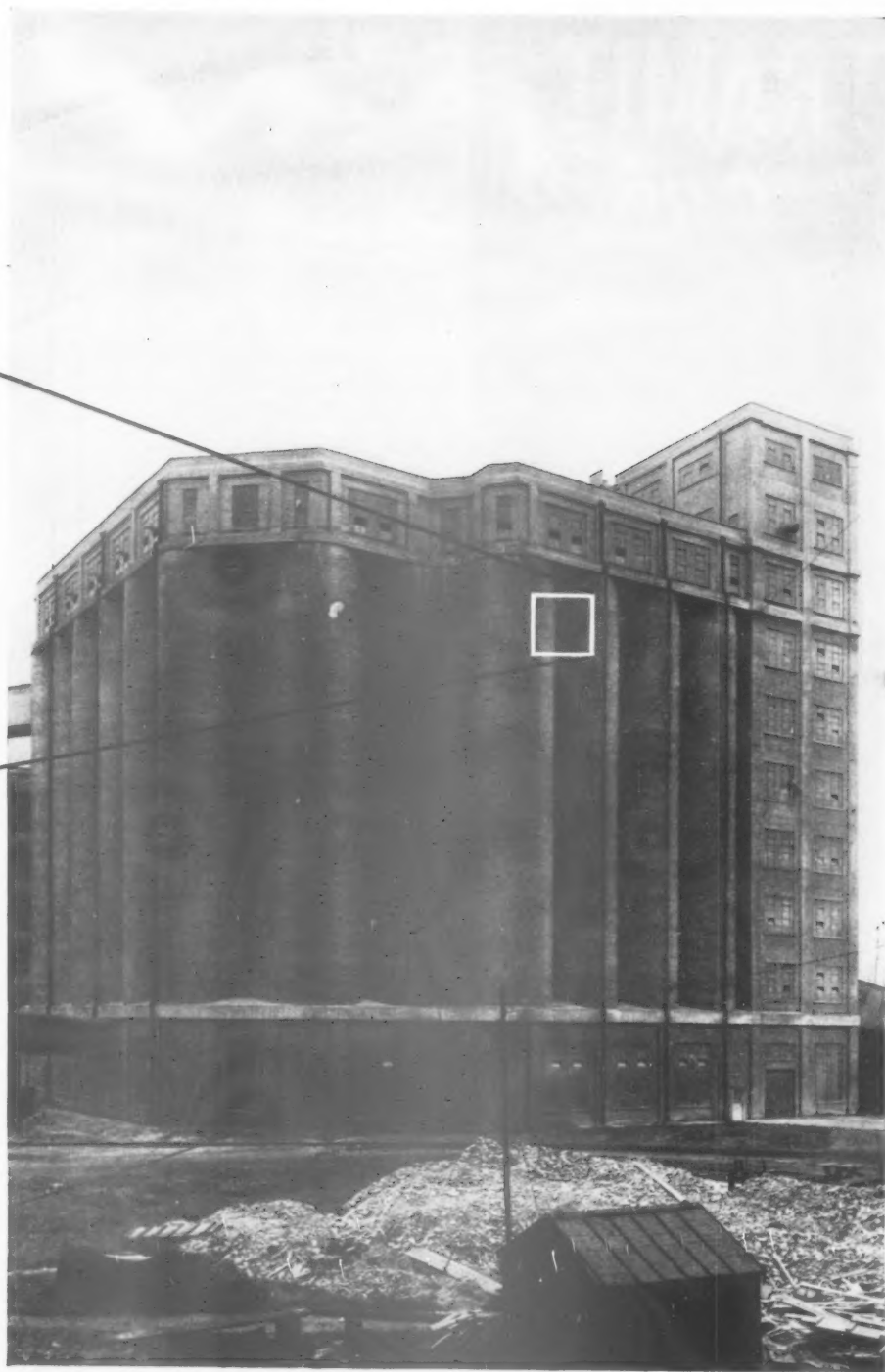
Factors which influenced the choice of boiler plant were: the distant situation of the new buildings in relation to the main boiler house; the difficulty of providing fuel storage and access to it; and the difficulty of providing a suitable chimney that would be unaffected by the proximity of adjacent high buildings.

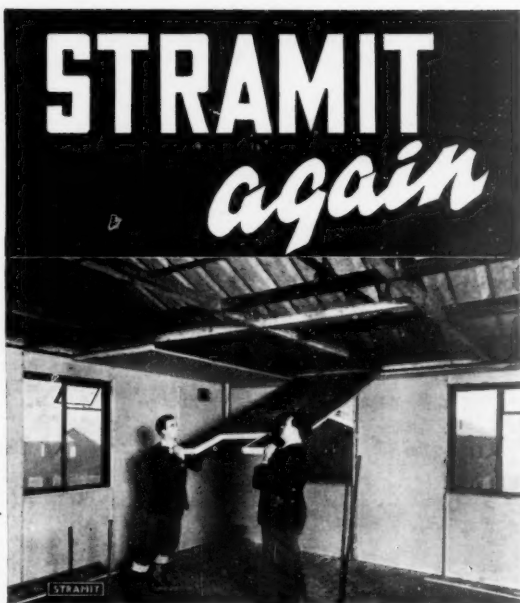
The new single-storey block contains eight classrooms with cloakroom accommodation. The total catalogue rating of the two automatically controlled boilers is 720,000 B.T.U's per hour.

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Some of the cornice and enrichment work had become dangerous owing to erosion and blast damage and the existing rendering was removed. The old stock brickwork was treated as follows:—

- Cemprover No. 4 ("Plaskey") applied by brush and stippled.
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The Contractors were:

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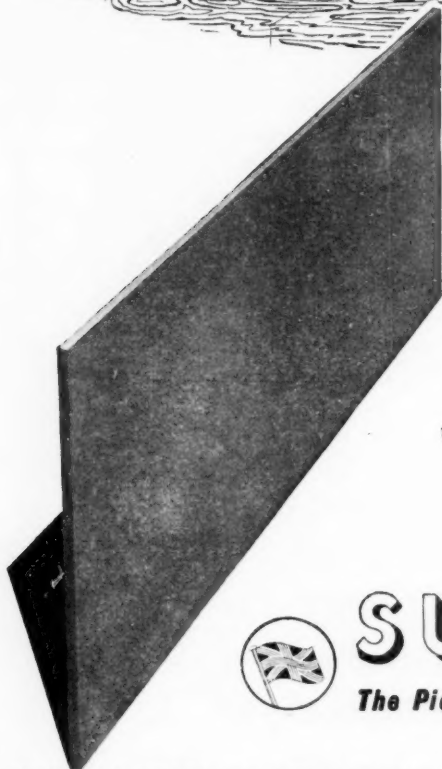
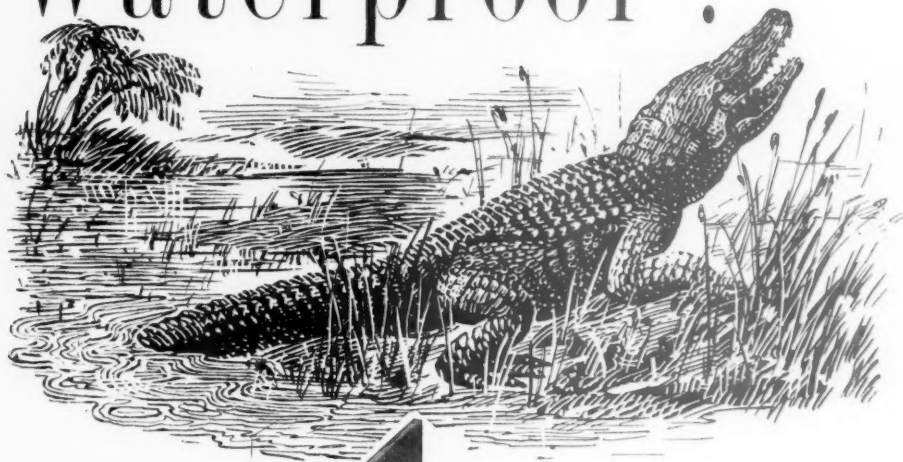
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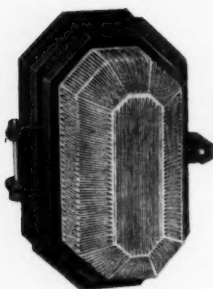


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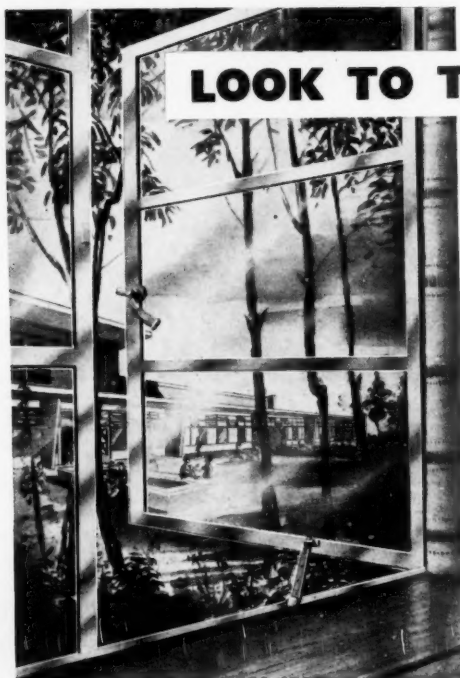
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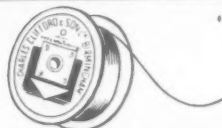
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Fig. 1. - Rig and Gear for applying impact tests.



Fig. 2. - Rig for static loading tests. (Floor section is inverted, with captive airbag beneath for loading.)

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THE ARCHITECT & BUILDING NEWS

The "Architect and Building News" incorporates the "Architect," founded in 1869, and the "Building News," founded in 1854. The annual subscription, inland and overseas, is £2 15s. 0d. post paid; U.S.A. and Canada \$9.00. Published by ILIFFE & SONS LTD., DORSET HOUSE, STAMFORD STREET, LONDON S.E.1. Telephone: WATERLOO 3333 (50 lines). Telegrams: "ARCHITONIA, SEDIST, LONDON."

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"PRAISE IS THE HIRE OF VIRTUE."

THERE is a solid tradition in this country which sustains the formal eulogy of a person who publicly receives a high honour. The freedom of cities, the award of honorary degrees, of Nobel Prizes, public testimonials or retirement gifts, all produce fitting formalities of oratory and of supporting speeches. The principle is the same throughout, the variants only occur with the importance of the occasion and with the gifts of those who bear the oratorical burdens.

One of these traditional occasions is undoubtedly that annual general meeting during which the Royal Gold Medal is presented by the President of the Royal Institute of British Architects on behalf of His Majesty the King—a fitting occurrence for the grandiloquent, the elegant and the formal oratory of those who pay tribute to the recipient and for those who meet and acclaim both medallist and occasion.

This presentation has come round again and the echoes of its words die down slowly as they are read in the pages of journals and newspapers. The presentation of the Royal Gold Medal to Mr. Vincent Harris gave opportunity for speeches and eulogies. There was the purely formal—still holding on to a more pompous past; there was the hilarious—coming unexpectedly from the President of the Royal Academy of Arts and there were a number from what may be briefly summarised as those of "satisfied clients". These last were more personal and more localised and, by virtue of these qualities, more interesting and human.

We wonder if anyone has considered the compilation of an anthology of writings and remarks from architecturally Satisfied Clients? Such a volume might, perhaps, have to have also an appendix, if only as an antidote or an anticlimax (in the Greek sense of comedy) which should include some of those indignant wails of protest or outraged feelings that are also sometimes received by architects, either through their letterboxes or which accompany the reviews of their work in the press.

Our anthology, to be at all complete, must go back to the dawn of architectural patronage; it would include the praise of Pericles and that noble tribute to Wren which is in St. Paul's—*Lector si monumentum requiris circumspecte*—and continue its printed way down to quotations from the speeches of last week.

But this public praise, recorded for posterity and precious as it must be for those who have accomplished the architecture that is praised, is not the only kind which architects value as a reward for their labours. There is a certain sort of letter that sometimes is the last document to be included in the files of a job; it comes from the "Satisfied Client"—sometimes an individual, sometimes the chairman of a committee or of a trust—and conveys heartfelt appreciation of the work of the architect with congratulations on its successful completion.

We wonder, however, how often this special sort of appreciation, sent without advertisement and received with secret gratitude, really does become the last item of the file. After months, sometimes years of hard thought and of the tribulations that go inevitably with every job in these latter days, it is a thing that may be valued above all others—even though, by his professional code, an architect's "testimonials" cannot be used to advertise his work. We wonder, too, how many reasonably Satisfied Clients omit to send it or realise that it would be of any value or contentment to the recipient.

The R.I.B.A. Library keeps an elaborate index of buildings, cross-referenced with the names of the architects responsible for their design and erection. We should hate to suggest further work for an institution already so fully occupied, but suppose that this index could be augmented by the inclusion of Satisfied Clients' remarks, how much more interesting and human this cold factual file

The title is a quotation from Cicero.

would become. The entries, of course, would have to be made in *red ink*, with little red asterisks to indicate that, in the absence of recorded approvals, there are also silences which can be assumed to have given consent to satisfactions. (We must anticipate correspondence and say we "talk of dreams which are the children of an idle brain".)

Perhaps, when all is said and done, the thing most valued by an architect is a change of heart by an intelligent lay client who waits for the completion of the building to express his real opinion. To illustrate our point we quote the remarks of one of a group of clients—and how precious it must have

been to the architect concerned: (When the building was in progress—"I think it will be a perpetual eyesore"; (some nine months afterwards and the building just opened)—"I made the biggest error of judgement I have ever made... every day I find something fresh to admire about it. I marvel at the vision which could see the final effect of so difficult a scheme".)

Would it be too dangerous or invidious to attach published opinions to each exhibit of the One Hundred Years of Architecture Exhibition shortly to be staged at the R.I.B.A.? It would certainly add to the 1951 fun—for both layman and architect!

EVENTS AND COMMENTS

P.R.A. AT THE R.I.B.A.

SIR Gerald Kelly spoke at the R.I.B.A. on the occasion of the presentation of the Royal Gold Medal. He said some extraordinary things. It is becoming a tradition among Presidents of the Royal Academy to say extraordinary things. For example: "Of course, I have my failings, but at least I do not pretend to know about architecture, and so I shall spare you those extremely boring statements which we are apt to make about artists in other fields."

"I feel pretty certain that painters talk rot about architecture, because I can assure you that architects are absolutely awful about painting! Ned Lutjens, whom I knew and loved, as many of you must have done, was quite frightful when talking about painting! Indeed, I can only hope that most of the things he said to me were his idea of an odd joke!" Well, that would have made Michelangelo laugh if it did not make him cry.

THE STORY OF EXHIBITIONS

ONE way and another there is plenty of talk about exhibitions this year, and, while everyone seems to know something about the Great Exhibition of 1851, very few, I imagine, know anything about the origins of exhibitions or their development from the first French National Exhibition of 1798. Everyone knows that the Eiffel Tower was built as part of an International Exhibition, but when? Few people could name the largest exhibition ever held or hazard more than the vaguest guess at the origins of the Royal Academy.

Mr. Kenneth Luckhurst, Secretary of the Royal Society of Arts, has written a book which gives all the answers in a most readable fashion. He traces exhibitions from the first shows of art open to the public and then to the French National Industrial Exhibitions which were organised to boost French trade in competition with British. The Great Exhibition of 1851, in which the R.S.A. played so large a part, is put in its correct place in exhibition development and, as the first International Exhibition, with an attendance of just over six million, it is shown starting the movement which cul-



The P.R.I.B.A. congratulates Mr. Vincent Harris on receiving the Royal Gold Medal.

minated in 1900 in the Paris exhibition, visited by more than thirty-nine million people. The New York World's Fair of 1939, though only once exceeded in area—at St. Louis in 1904—only drew twenty-six million, and was the last of the great International Exhibitions.

The book contains many interesting illustrations of exhibitions and makes me want to know more of some of the astonishing temporary buildings which were constructed to house them. For example, the Palais des Machines of 1889, with a floor area of fifteen acres, covered with spans of 375 feet, 1,365 feet long, and 150 feet high. Nearly twice the width and height of St. Pancras Station. Or again, the astonishing building constructed for the Paris Exhibition of 1867, which covered 35 acres and was a mile in circumference. It consisted of a number of concentric ellipses. The idea was that some types of exhibit required more space than others and that the large exhibits should be housed in the outer rings of the ellipse with the smaller ones inside. Lines radiating from the centre were to divide the building into national sections. It was hoped that this would be an improvement on the grid plan, but it was not a success because the requirements of the various countries varied enormously between the different sections.

While it is true that Mr. Luckhurst mentions the Stockholm exhibition of 1930 designed by Gunnar Asplund, he does not sufficiently stress that here was

the great turning point in exhibition, and indeed architectural, design. But then, the book does not set out to describe exhibition design so much as the developments of exhibitions, and this it does extremely well.

BUILDERS AND DENTISTS

BUILDING technique is coming into dental surgery. My dentist has a wonderful new Christmas tree and chair combination, which incorporates an automatic compressor, a drill with a water and air jet attachment on its head, and an electric vibrator for consolidating fillings. The last is a new horror for the fearful, as it sets the whole head in a buzz and makes the ear drums tickle.

THE HELICOPTER AGE

FIFTEEN years ago no self-respecting city considered that it could afford to be without an airport. Most were inconveniently placed from the city centres and very few were ever used for scheduled passenger carrying. Fortunately for the cities concerned the Air Ministry suddenly needed large numbers of airfields for training schools. Now a few are used by our internal air services but, except for joyrides and club activity, not much happens on many others. The main disadvantage of internal flying in this country being that on all but the longest journeys the time taken to and from the airport added to flying time is seldom much shorter than the time taken by train. The helicopter may change all this, and it is interesting to note that the Leeds Draft Development Plan includes a helicopter station within three-quarters of a mile of the Civic Hall. It is proposed to use part of an existing recreation ground on Woodhouse Moor. If this is done another recreation ground will be constructed elsewhere.

SLIPPERY FLOORS

MRS. M. M. Butterworth, a Yorkshire magistrate, has started to collect details of accidents caused by slippery floors. She says that such floors in her part of the country cause more accidents than occur on the roads. This may be because there are more floors than motorists. Slippery floors are a pest, but it is not always the manufacturer's fault. Housewives like to have a glass-like finish on their floors, and then complain when they slip on a loose rug. Some patent floors need a good coating of polish to preserve them, and some polishes give a more slippery finish than others.

SWEDISH-BRITISH TEXTILES

THERE is an interesting show of new textiles at No. 7 Bedford Square. It has been organised by Messrs. Gray's Carpets and Textiles and is the result of an agreement between that organisation and Madame Elsa Gullberg, the Swedish designer. Madame Gullberg's designs will be marketed in this country under the title Gullberg-Gray, and although many of her textiles are produced on hand looms, her association with Messrs. Gray's will make large scale production possible. Much of the material shown is very attractive and the prices seemed most reasonable until I realised that they did not include purchase tax.

Also on show were some products of the Gullberg-Byggbara joinery factory. It is hoped to import some of these fittings or alternatively to import the ready-sawn timber and assemble it here. The fittings, which are made of beautiful wood and are finely detailed, consist of clothing cupboards and storage shelves.



The pictures show the new first class compartments and dining coaches in the Festival of Britain trains which will soon be put into service. The designs of the interiors have been developed in collaboration between the Railways Carriage and Wagon Engineers and Architects.

The dining cars are a development of a type originally put into service by the former L.M. & S. Railway Co. The architectural advisers at the time were the former architect and principal assistant architect of that company, Mr. W. H. Hamlyn and Dr. J. L. Martin, F.R.I.B.A. The assistants connected with the design and textiles of the new compartment coaches were Ian Colquhoun and D. R. Shorten, A.A.R.I.B.A.

THE PRESERVATION OF MODERN BUILDINGS

I READ somewhere the other day that it was high time we started a movement to preserve those of our distinguished modern buildings which are in danger. First on the list I would put the work which Tecton did for the Royal Zoological Society both at Regent's Park and Whipsnade. There are rumours that the penguin pool, with its intertwining ramps, is to be altered to accommodate, I believe, sea-lions. It is anyway in a very shabby and unkempt condition. The gorilla house and studio look little better than dumps. No one seems to care about them, although when they were new they were the talk of London and an architectural photographer's paradise. Whipsnade is no better. The excellent elephant house has been completely neglected, and although it contains a pachydermic imitator of Larry Adler, it looks disgracefully shabby. Part of the inside has been



The picture shows one section of the "Hospitality at Home" exhibition now at the Tea Centre, mentioned in this column last week.

divided off with corrugated iron and boarding to provide a home for an enchanting baby elephant, which is not at present on view to the general public. A coke stove with wandering pipe piercing a window stands against a wall, and someone appears to have tried out a fresco in one of the pens. At the back a lean-to shed is fitted between two of the curved walls. The impression on the visitor is that the Zoological Society hates these buildings. I imagine that times are hard for the Zoo in spite of the good years they have had since the war. After all, lions, tigers and bears now have to compete with champion boxers for the available horsemeat, and building licences are unlikely to be forthcoming for homes for hippopotami when humans are out in the cold. All the same, Whipsnade is well worth a visit, but do not, as I did, choose a fierce snow storm in April for it.

HOUSES AT HATFIELD

FROM Whipsnade it is a mere elephant ride to Hatfield, where on Saturday the Parliamentary Secretary to the Minister of Local Government and Planning opened a show house designed as one of a row by Lionel Brett for the Hatfield Development Corporation, and furnished for the C.o.I.D. by Margery Holford and Joan Patrick.

The houses will no doubt be published in the *A. & B.N.* before long. I liked them very much. This particular terrace is stepped back at each party wall, making a good private space at the rear of each house. The dining room, which has an almost too large window for safety, and kitchen, have a wide opening between them giving the housewife a view of the garden and children. Part of the outside wall is set back into the building, providing a covered sitting and eating space outside the dining room window. An access passage runs through the house and contains the coal-hole, sensibly distempered black, and the meters, and can be used for pram and bicycle storage.

The furnishing, which was well and simply done, was all supplied by local stores on loan. The cost would be about £500 complete. It seems an awful lot of money, but with prices at their present level Mrs.

Holford and Mrs. Patrick did very well. I particularly admired a collage of fish and vegetables in a wicker frame in the kitchen, and found that it had been specially made the night before by the furnishers.

The C.o.I.D. are to be congratulated on this idea, which was obviously much appreciated by the crowd of visitors after the opening. I tried hard to overhear some rude comments but only heard one person say that the terra cotta distemper on the stairs would not do, would it, Fred? I very much hope that the people who will eventually move into this and other houses nearby will be influenced by this show to choose small and simple furniture. What is more, I hope that the stores through whom it was obtained will be persuaded to stock contemporary furniture permanently.

HOUSES AT CUDWORTH

WHEN so many people are homeless and so many others are trying to provide them with houses which cost more and more every day, it is maddening to read that during Easter two houses under construction at Cudworth in Yorkshire were broken into and seriously damaged, presumably by children. Wiring was torn from conduits, windows were broken, plaster destroyed, and several hundred roofing tiles broken. This may perhaps be an isolated case of serious damage, otherwise it would be worth while to have watchmen on the larger building sites. All the same it is one of the more distressing signs of the times.

HOUSING LIKES AND DISLIKES FROM HALIFAX

THE Halifax Housing Investigation Sub-Committee has just reported on the likes and dislikes of users of corporation housing. The chief complaint is dampness of walls—surely this only means that houses have had insufficient time to dry out, which is scarcely surprising in view of the weather. The front-to-back living room is disliked because it is said to be difficult to heat—perhaps the stove is too small. Steel windows are unpopular. I wonder why? The two living room type of house is the most popular. Built-in electric fires are not popular, but cupboards and built-in wardrobes are much appreciated.

SHACKS AND HOLIDAY BUNGALOWS

THE Worcestershire County Council has, it is reported, issued some hundreds of notices to owners of temporary dwellings in the Severn Valley, requiring the removal of the buildings by September 30, 1953. Many of the buildings in question are described as week-end bungalows, but I imagine that some at any rate are the permanent homes of people for whom the Worcestershire County Council is unable to provide houses. It is entirely praiseworthy to wish to remove eyesores from the countryside, but is even more praiseworthy to prevent eyesores occurring in the first place. A supplementary reason for wanting to remove the dwellings is that they are said to be unsatisfactory from the public health point of view. I wonder how much evidence there is that this is so, or whether it is another way of saying that the buildings do not conform to the by-laws.

I do not like to see the countryside dotted with shacks, but if I possessed one I should very much resent being told to pull it down. Shacks can make delightful homes, and I remember with what pleasure I once spent a week-end in a converted railway carriage. Prevention, as they say, is better than cure. If I apply that saw to the buildings the sanitary authorities will say that that is precisely what they mean, and so we shall both be satisfied.

ABNER

NEWS OF THE WEEK

P.R.I.A.S. Nominated

The Council of the Royal Incorporation of Architects in Scotland has nominated as president for the year 1951-52, Lt.-Col. Alexander Cullen, O.B.E., T.D., F.R.I.C.S., F.R.S.E., M.T.P.I., F.S.A., F.R.I.B.A., county architect and planning officer to Inverness County Council.

Teachers' Conference at the R.I.B.A.

The third meeting of the Architectural Teachers' Conference, London Area, will be held in the Council Chamber of the R.I.B.A. on April 28 at 10.30 a.m. Professor A. E. Richardson, R.A., will be in the chair. The morning session will be given to a paper on *The Place and Purpose of History and Theory of Architecture in the Curriculum*, by the Northern Polytechnic School of Architecture, introduced by J. G. Moore, A.R.I.B.A., followed by discussion. The subject of the afternoon session will be *The Approach to Science and Structural Mechanics in the Architect's Training*, by the Hammersmith School of Building and Arts and Crafts, introduced by E. M. Rice, F.R.I.B.A., followed by discussion.

There will be small exhibitions of drawings related to the subjects. The Hon. Secretary of the Conference is F. G. Goodin, F.R.I.B.A., Hammersmith School of Building and Arts and Crafts, Lime Grove, Shepherds Bush, London, W.12.

Housing Progress Report for February

The number of permanent houses completed in Great Britain during February was 13,984 compared with 13,150 in January.

The total number of houses completed under the post-war programme is now 1,005,798 (848,652 permanent and 157,146 temporary).

Housing Centre Statement

The Housing Centre has submitted a statement on Housing to the Minister of Local Government and Planning. The Centre is convinced that the present serious housing situation requires that independent investigation into policies and aims should be pursued, and the outline is submitted to the Minister in the hope that it will serve as a basis for further investigation and study. The following is a very brief summary of the recommendations.

The present very rapid rise in the cost of house building and in the cost of living reinforces the arguments used in this statement. It supports the main contention that housing policy in the immediate future must be directed towards the conservation of our national assets in this field, and the use of public funds to secure decent homes for those who cannot otherwise afford them. At the same time every effort must be made to avoid a reduction in the number of

dwellings. The size and standard of the dwellings produced should be suited to the needs of the tenants. Private capital and enterprise as well as public funds should be used to promote further much needed house building. The Housing Centre urges the Government and the local authorities to give immediate and careful attention to the following points and policies in the light of the present serious housing situation:

(a) The number of new dwellings must not be reduced.

(b) Existing housing property must be maintained and adapted to avoid further loss of habitable dwellings.

(c) Local authorities should be further encouraged to provide more dwellings of different sizes within their allocation of capital expenditure. They should provide dwellings for households of two and three persons where by doing so a greater number of separate households can be satisfactorily housed.

(d) Local authorities should be encouraged to build to simpler standards.

(e) The first claim on public funds must be for housing those most in need. This will necessitate the more extensive use of rent rebate systems. Dwellings should also be provided for those able to pay economic rents.

(f) The Rent Acts must be revised to allow increase in rent related to the cost of repairs. Other anomalies should be considered at the same time, and a thorough overhaul of these Acts must not be postponed any longer.

(g) A national non-profit making association should be set up with official backing and assistance from public funds to repair, maintain and manage property no longer in a position to attract private enterprise.

(h) No one should be disqualified from being allocated a dwelling owned by the local authority, because he has not previously resided in the area, but an occupational qualification should be substituted for those who have not previously lived there.

(i) Local authorities should use greater discretion in the allocation of licences for private building.

(j) New Towns should be given every opportunity to enable them to build speedily to relieve central congestion, and at the same time the redevelopment of central areas should be energetically carried out.

I.Q.S. and F.o.B.

The Institute of Quantity Surveyors is arranging in connection with the Festival of Britain an exhibition which is to be held at 98 Gloucester Place, London, W.1. It will be opened on June 2 and remain open until September 29, 1951.

The exhibition will include a collection of old books, maps, prints, engravings and various rare documents and exhibits of historic interest, including exhibits relating to the Great Exhibition of 1851. The illustrated catalogue of the Great Exhibition and Tallis's History

and Description of the Crystal Palace will be on view.

Many fine books of architectural and topographical interest have been assembled and several old books on Quantities, Measuring and Pricing form part of this collection.

The exhibition will be open daily (excepting Sundays and Bank Holidays) between the hours of 2 p.m. and 5 p.m. Admission will be by catalogue only, obtainable from the Institute of Quantity Surveyors, price 2s. net (by post 2s. 3d.).

I.C.A. Exhibition

A retrospective exhibition of the art of Graham Sutherland is being held at the Institute of Contemporary Arts from April 11 until May 4.

A discussion of the Exhibition, at which a number of art critics will be speakers, is to be held at the Gallery on Thursday, April 26. Mr. Philip James, Fine Arts Director of the Arts Council, will be in the chair.

Code on Optical Projection Equipment in Schools

The Council for Codes of Practice for Buildings has now issued for comment Code 412, "Installation of Optical Projection Equipment in Educational Establishments," prepared for the Council by a Committee convened by the Illuminating Engineering Society.

This Code deals with the provision and installation of optical projection equipment in schools and other educational establishments, and advises on the choice and location of such equipment. The Code is not applicable where inflammable film is used.

The Code is in draft form and is subject to amendment in the light of comments which should be submitted by May 14, 1951.

Copies of the Code may be obtained from the British Standards Institution, 24-28 Victoria Street, London, S.W.1, price 5s., post free, reference CP (B), 1,000.

APPOINTMENT

Sir Thomas Phillips, G.B.E., K.C.B., has been appointed by the Minister of Local Government and Planning, Mr. Hugh Dalton, to be Chairman of the National Joint Council for Local Authorities' Administrative, Professional, Technical and Clerical Services.

Sir Thomas succeeds Sir Horace Wilson, who has been Chairman of the National Joint Council since it was set up in 1944.

Sir Thomas Phillips is Chairman of the Central Land Board and War Damage Commission. He was Permanent Secretary of the Ministry of Labour and National Service from 1935-1944 and of the Ministry of National Insurance from 1944-1948, when he retired from the Civil Service.

OBITUARY

Mr. William Constable, L.R.I.B.A., has died in Musselburgh, near Edinburgh, at the age of 87. Mr. Constable was Provost of Musselburgh from 1916 to 1919.

IN PARLIAMENT

Apprentice Scheme Ending

It was announced on April 3 that the building apprentice scheme is to be wound up. The Minister of Works stated that the scheme was inaugurated as a temporary measure to meet immediate post-war needs. In view of the extent to which it had by now served its purpose, and of the calls of the defence programme on Government expenditure, it had been decided not to put in hand further works under the scheme after March 31, and to bring the whole scheme to a conclusion by March 31 next year. The building industry had been invited by the Building Apprenticeship and Training Council to consider, while the present scheme was running down, the establishment of an alternative scheme of its own.

He recalled that the scheme was instituted in 1945, on the recommendation of the council, as an emergency measure to assist recruitment at a time when the number of boys wishing to enter the industry and needed to maintain its man-power exceeded the number of normal vacancies for apprentices. Over 6,000 boys, Mr. Stokes said, had been trained under the scheme and absorbed into the industry, and over 2,000 houses had been built. The Ministry of Works had borne the difference between the actual cost of work under the scheme and the cost which would have been incurred had the work been done normally by competitive tender with the usual complement of adult labour.

Uniformity in Contracts

The Minister of Works was asked how far there was uniformity in the form of building contracts used in connection with work for Government Departments, and stated that all the principal departments placing building contracts used the standard General Conditions of Government Contracts for Building Works (Forms CCC/Wks/1 or 2). Mr. Walker-Smith then asked if it was possible, if the contractor so desired, for the standard form issued by the R.I.B.A. to be used in this type of work. Mr. Stokes said it was not. They could not adopt it without considerable alteration. (Apl. 3.)

Traffic Ramp

Mr. Stokes informed Mr. Hollis that no decision had yet been reached whether the proposed traffic ramp to the basement of Carlton House Terrace should run from Waterloo Place or Cockspur Street. Mr. Hollis complained that inconvenience might be caused by the present site. People dining at the Athenaeum might easily fall into the ramp. Mr. Stokes assured him that the matter was not absolutely settled. A preliminary sketch plan was approved by the Westminster City Council. The Royal Fine Art Commission wanted the entrance through Cockspur Street, but they forgot there was a Nash sewer in the way. (April 3.)

A Licensing Test

Mr. D. Walker-Smith asked the Minister of Works what tests were

used to distinguish between licensable and non-licensable work in the interior of buildings for the purpose of Defence Regulation 56A. Mr. Stokes said that in most cases licensable work was clearly distinguishable, but where any doubt arose his officers could obtain legal advice. Mr. Walker-Smith asked if the test they sought to apply was the distinction between landlord's and tenant's fixtures—a difficult test indeed, and one that gave rise to a good deal of hardship. Mr. Stokes agreed that any test was difficult to apply, and ultimately matters might have to be decided by the courts. His officers had instructions, but they were subject to legal interpretation after that. (Apr. 3.)

London Shelters

Mr. de Freitas, Under Secretary, Home Office, informed Mr. Henry Brooke that he hoped to reach a conclusion before long on the employment of consultants by London local authorities to assist with the second stage of the shelter survey called for in Civil Defence circular No. 48/1950. One difficulty was that the services of consultants who might be employed on the shelter survey might be needed more urgently for constructional work in the approved defence programme. Mr. Brooke protested that the authorities had been asked to complete this important job by the end of June, but still could not get the guidance they required from the Home Office. The impression was being given that Government Departments were not taking Civil Defence seriously. Mr. de Freitas replied that civil defence was extremely important, but they did not want it to prejudice any constructional work for the fighting Services. (Apr. 5.)

Estate Roads

Mr. Gerald Williams asked the Minister of Works why licences for work on the maintenance, repair and re-surfacing of estate roads and paths were now to be included in the allocation allowed for building licences. Mr. Stokes explained that no separate provision was made in the investment programme for estate roads and paths, and they were therefore included in the miscellaneous category, for which a general allocation was made. Within that allocation local authorities and his licensing officers licensed as much as they could of the more important work. Mr. Williams asserted that this was a new departure, that much essential maintenance work was being held up, and firms specialising in that type of work were seriously hit. The Minister replied that he was as anxious as anyone about maintenance work, but it had to be put somewhere and was put into the miscellaneous field of capital investment. (Apr. 3.)

Fuel and Heat

Mr. Linstead asked the Minister of Fuel and Power what was the estimated annual saving of fuel when a stove was substituted for an open fireplace; and what action he was taking in consultation with the departments concerned, on the lines indicated by the Professor of

Thermodynamics in the University of Oxford for the installation of stoves in place of open fireplaces in Government offices and in other places under public control. Mr. Noel-Baker stated that, burned in an improved openable stove, 194 cwt. of coal would produce as much useful heat as 34 cwt. of coal burned in a pre-war stool-bottom grate. The Minister of Works had formulated a forward programme for Government offices, providing for the replacement of over 5,000 old-fashioned grates by improved stoves during the next 12 months. Other authorities had been approached with a similar object in view. Central heating was the most efficient means of providing space heating for large buildings, and the use of this method would continue to be pressed where appropriate. (Apr. 3.)

Festival Inquiry

Parliament was informed on April 3 by the Minister of Works that the board of Festival Gardens Ltd., at his request, invited a firm of chartered accountants nominated by him to investigate and report on the circumstances which had caused the financial commitments of the company to be greatly in excess of the amount which was estimated to be sufficient last December.

[On March 6 Mr. Herbert Morrison told the House of Commons that the total expenditure would be £1,625,000. On March 20 he presented revised figures amounting to £2,500,000, with a possible loss on six months' operation of £1,500,000, and announced the Government's intention of introducing legislation authorising a further loan of £1,000,000 to Festival Gardens Ltd., because the excess had proved more serious than earlier information indicated.]

Mr. Stokes also announced that he had accepted the resignation tendered by Sir Henry French, chairman of Festival Gardens Ltd., and that the board had at his request strengthened the managerial arrangements by inviting Major H. D. Joseph to become managing director. He was consulting the board a view to finding a new chairman.

Sir Henry French, he said, shared the view—on the matter of principle—that when something appeared to be wrong with the control of expenditure of public money it was right that changes in the top direction should be made; and he recognized the unpaid service which Sir Henry had rendered in working out the scheme for the gardens and in putting it into execution so quickly in spite of so many difficulties. Major Joseph was a man of the highest standing and experience in the successful provision of outdoor entertainment, and the company was fortunate in having secured his whole-time services unpaid for the 1951 season.

South Bank Expenditure

Commander Noble asked the Minister of Works how much has so far been spent on the South Bank site of the Festival of Britain; what further expenditure was expected; how these figures compared with the original estimates; and how they would affect

the final profit and loss account. Mr. Stokes replied that about £2,500,000 had so far been spent on the South Bank Exhibition. The further expenditure on the South Bank Exhibition was estimated at under £4,000,000, much of which was already committed.

The original estimate for the South Bank Exhibition given more than two years ago was about £6,000,000, but a general contingency was also provided from which part of the estimated increased expenditure will be met. As a result of other adjustments, it was

anticipated that the profit and loss account of the festival as a whole would not be affected. It was, however, not possible to be definite on this point since revenue depended largely on attendances, sales of publications, etc. (Apr. 3.)

C O R R E S P O N D E N C E

Modular Co-ordination

To the Editor of A. & B.N.

Sir.—Various ideas on modules have been considered and debated by architects for many hundreds of years. Another system of modules has just appeared and, encouraged by Mr. Howard Robertson's letter in your columns, I should like to make a few observations.

Firstly, concerning the place of modules and the importance of dimensions generally in architecture. It is universally agreed that architecture lies in the mastery of the two disciplines, art and technique, and the exact and proper fusing of the two. It is in this process of fusion that modules have been used by architects as "catalysts" to assist and make the process possible.

The nature of modules and their significance as "catalysts" lies in the fact that they establish certain fixed points in a limitless universe and are consequently directly associated with philosophy. The level of idea fixing such points varies considerably from, say, the philosophical concepts of the Pythagoreans to purely utilitarian formulae. It is this level of idea which is reflected in a building and stands as a monument to the men who conceived it and their civilisation. It is a universal language which can be understood irrespective of date or clime.

Many different modules exist and have existed for thousands of years, modules related to universal concepts, celestial concepts, living matter and human proportions; an inspiration and challenge to architects of succeeding civilisations. Each architect strives to understand what he can of these ideas and to interpret them to the best of his individual ability. It is against this background that we must consider any proposed system for fixing dimensions.

Secondly, concerning the particular system of modular co-ordination recommended in the Report published by the British Standards Institution, let us consider these proposals against this background and see if any new light is being shed on existing concepts or if any new philosophy is being propounded.

Broadly the gist of the Report implies that in order to speed up production of buildings in the industry and the drawing office, it is recommended that architects agree to a system of standard dimensions. The units suggested are multiples of 8 in., used horizontally in increments of 40 in., and vertically in a scale of preferred sizes. The horizontal unit was apparently chosen by establishing an order of dimension sufficiently large to make it worth while industrially and sufficiently small to make a con-

cession to the architect's natural desire to design his own buildings. The actual measurement of 40 in. being decided upon mainly because, by using it, near approximations to the salient points of the Ministry of Health plans in the Housing Manual can be obtained. These plans, to the best of my knowledge, have no claim to architectural merit, but are purely excellent technical diagrams of what a ministry considers to be the minimum physical requirements for certain types of buildings. The vertical dimensions were fixed, it appears, by close approximations to salient sectional heights commonly found in buildings.

Evidently these proposals cannot be considered to contain, and in fact do not claim to have, any philosophical content other than the implied hypothesis that it is more important to find ways to increase production of houses than to permit the development of architecture; a view which I do not share.

In conclusion, may I say that this present instance brings the idea of modules down to the level of a building technique. Consequently, although it is likely to achieve its object in speeding up the erection of buildings, in doing so it runs the grave risk of making the possibility of architecture even more remote than it is. There exist however other modular systems which are in my opinion related to architecture.

I am, etc.,

SERGEI KADLEIGH.

To the Editor A. & B.N.

Sir.—After studying the report of the B.S.I. on this subject I feel that I would like to know very much more about the experimental work carried out so far before giving a considered opinion.

So far, however, I think the 36 in. module should receive very careful consideration where site operations are under review. It has the advantage of containing the same factors as the dimensions of many manufactured articles at present in use.

For instance, bath sinks are frequently supplied in sizes increasing by 3 ins. and 6 ins. This also applies to offsets and bends in cast iron goods and slab partition blocks. In structures where face brickwork is an architectural feature bonding is based on the same common factor. Where sheeting material requires timber or steel support the 36 in. module might effect economy as the extra spacing required by the 40 in. standard might mean an additional supporting member.

Storey heights permissible under certain rural bye laws might be exceeded by using the greater module although the increase would be small.

The aesthetic values of the 40 in. module may well outweigh all these many other considerations when evidence is accumulated and studied in detail and further experiment carried out.

The main task appears to fall on the manufacturer who will be called upon to solve major problems both financial and technical and it will be interesting to hear qualified opinion on these matters.

Existing plant equipment could be readily used for any standardisation of erection and doubtless savings could be effected in this way.

I am, etc.,

C. E. POLOCK.

Anti-Abner

To the Editor of A. & B.N.

Sir.—On March 23 you commented on my pamphlet on "Housing," and Abner stated "It bristles with the sort of facts which I find difficult to assimilate."

Now, Sir, these "facts" are about the building industry and it is curious that out of all the reviewers and leader writers not one complained about the difficulty in assimilating them—with the striking and solitary exception of the contributor to an architectural paper.

And this helps to prove my point, which is that architects have not grasped the problems (especially the administrative problems) of the building industry. As they give orders to the industry in the shape of detailed drawings it is essential they should have a practical and first hand knowledge of the machine they are ordering about. And until they acquire it they cannot be efficient and sympathetic "masters."

I have usually put this lack of knowledge down to a burning enthusiasm for mastering architectural principles which left little or no time for studying the problems of the building industry. Never for one moment—until I read Abner—did I attribute this deficiency to mental processes which found "assimilation" of facts difficult.

I am, etc.,

ERNEST MARPLES, M.P.

To the Editor of A. & B.N.

Sir.—It was with some regret and not a little surprise that I noted Abner's comments in your issue of March 23 on Mr. Ernest Marples' recent pamphlet on Housing. To say that a publication expressed in so straightforward and simple fashion as this "bristles with the

sort of facts which I find difficult to assimilate," suggests that the reviewer is either unable or disinclined to grasp even the most elementary approach to this important subject. Anyone who has tackled the task of compiling a work of this kind knows that the difficulty lies not so much in acquiring the knowledge as in expressing it simply so that the average person can understand it. In my opinion Mr. Marples has overcome this problem most successfully.

The suggestions made by Mr Marples that Architects should work on sites to learn at first hand the Contractor's difficulties and that architectural training should give a more prominent place to practical building work and building costs are, of course, by no means new. Mr. Frank Lloyd Wright has consistently emphasised the importance of these matters in architectural education and has given practical expression to his theories on many projects in the United States.

In Holland it is an integral part of an architect's training to familiarise himself with the work of the craft trades and the problems encountered on the building site. Unhappily these examples have not been followed to any appreciable extent by architectural schools in this country. Since the war the Architectural Association School of Architecture and the Regent Street Polytechnic School of Architecture have provided facilities, on a restricted scale, for students to engage in practical building work, but these are the only instances which have come to my notice.

I know that many schools of architecture make arrangements for students to visit building works in progress, and while the value of such opportunities should not be under-estimated it cannot be claimed that they compare with practical building work as a means of familiarising students with the building crafts.

Your readers will no doubt be interested to know that the possibilities of meeting this important requirement in architectural training are now under preliminary discussion between the R.I.B.A. and the National Federation of Building Trades Employers.

Your reviewer states that several schools of architecture already have the matter well in hand. It would be interesting to know where they are and the extent to which training of this kind is being given.

I am, etc.,
ROBERT O. LLOYD,
Immediate Past President,
National Federation of Building
Trades Employers.

The R.I.B.A. External Examination

To the Editor of A. & B.N.

Sir,—The letter of your correspondent "Tutor" in your issue of March 30 contains vague criticisms of the R.I.B.A. Final Examinations.

As an external examiner for some years, may I give some facts which, apparently not fully appreciated, may enable the matter to be regarded more dispassionately.

Firstly, the main purpose of the oral examination is to enable the

examiners to check on the border line cases between pass and fail and to help the sound but slow candidate who knows but cannot get it down in time—in short to see that the candidate's paper has done him justice.

Secondly, an examiner is not permitted to indicate to a candidate whether he has passed or failed. Whether right or wrong, this effectively prevents the examiner being as helpful to the candidate as the examiner often wishes he could be.

Thirdly, among the large number of candidates presenting themselves are a very large proportion who have not yet reached a sufficiently high standard to justify their sitting for the examination. A greater appreciation of the standard required for a pass, both by some of the candidates and some of the schools and courses they attend, would do much to silence ill founded criticism at the source.

Fourthly, I know that neither the Board of Architectural Education, nor its Secretary, give "advice" in the sense "Tutor" uses the term. It is a policy of the Board to recommend students to undertake a full time course of study where possible, since this in general has proved the most satisfactory method of acquiring the architect's knowledge. Through its officers, the Board will inform inquirers as to the other available facilities in whatever district is required. But specific advice on the pros and cons of various schools or courses must of necessity be outside the scope of the Board's activities. Such advice as they can give must obviously be limited to general principles—beyond this the onus of suitable selection must rest with the student.

Bearing all these points in mind the oral question "What school did you attend?" or, as it is frequently put, "How have you done your training?" does not take on the sinister implication which "Tutor" gives it. I often use it as an introduction to questions as to what books the candidate has used or quite occasionally to get an obviously nervous candidate at ease so that he can do himself justice to more important questions. Nor have I ever found that it appeared to annoy any candidate. Personally I am just as interested in the source of study of the very good candidate as I am in the very bad. In my private capacity would-be students sometimes ask my advice, as they do other examiners. But the idea that the answer prejudices candidates in the eyes of the examiner is quite unfounded.

On the not infrequent occasions when an obviously intelligent candidate has produced a series of written answers which only show how ill-directed his studies in that subject have been, I have been sorely tempted to use the words (though not the snort!) your correspondent attributes to an examiner—"Go to a proper school and don't waste your time." In indicating to the candidate his probable failure in that subject the examiner who used them erred! But he may well have erred cruelly to be kind! There is something wrong with either a candidate or a teaching system which permits him either to appear for the exam. long before he has reached a suitable standard or to be relegated sometimes five or six times in a subject,—too

frequently, having seen such candidates, I suspect the system.

I should like to see published after such examination a list of schools, and correspondence courses, with the number of candidates they submitted and the number who passed. Students could then select their training grounds with more information than is at present available.

I am, etc.,
RICHARD HENNIKER.

To the Editor of A. & B.N.

Sir,—I have followed with great interest the article and subsequent correspondence on the question of the R.I.B.A. examinations, and it would appear that the gulf between the school trained examinee and his external counterpart is indeed widening.

The revised testimonies of study certainly ensure that the external student covers a similar syllabus to that set at a school, but here the difference ends. The school student starts taking portions of his Intermediate examination, e.g., General and Specialised History and Structural Mechanics, etc., at intervals during his training, whilst the poor external student has a hectic week when he has to satisfy the Examiners on all subjects.

Apart from the above mentioned differences, it is general practice in most schools to set a Design problem, which is carried to its conclusion with working drawings etc., over a period, whereas the Design and Construction papers set externally have to be completed in a limited number of hours under examination conditions.

Surely this present system is unfair to the student who cannot attend a school of architecture, either due to lack of funds or because of lack of teaching facilities in his neighbourhood.

Is it not possible for the examination for the external student to be split in the same manner as that practised by most schools, i.e., subject examinations at intervals allowing a similar time to prepare for each subject instead of the general concentration on all subjects needed in order to prepare for the hectic week mentioned above.

It would seem on reflection that the external student is called upon to do more in a shorter time than his fellow school student, and if the testimonies have been "raised" to "School" standard, surely the same principle should apply to the actual examination—a case of what is sauce for the goose should be sauce for the gander.

For obvious reasons I must remain anonymous, and

I am, etc.,
QUAERITUR.

BRITISH STANDARDS EXHIBITION

This year the British Standards movement attains its Golden Jubilee, and as a part of the celebrations an Exhibition supported by practically the whole range of British Industry will be held at the Science Museum, South Kensington, during the two weeks beginning June 18, 1951.

The Exhibition will be opened at 11.30 a.m. on June 18 by the President of the Board of Trade.

Admission will be free, and opening hours will be 10 a.m.-7 p.m. each day (except Sunday) from June 18 to 28 inclusive.

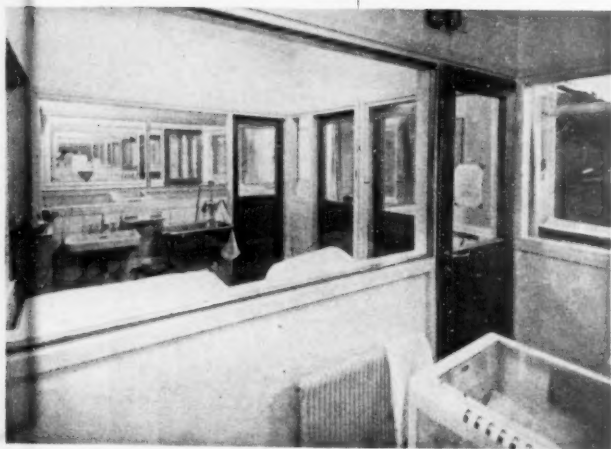


C H I L D R E N ' S C L I N I C

Bergen, Norway

**CHILDREN'S
CLINIC,
BERGEN**
architect:
**Gustaf
Birch - Lindgren's
Office**

The illustrations show a ward on 3rd floor, Isolation room on 5th floor and lavatory

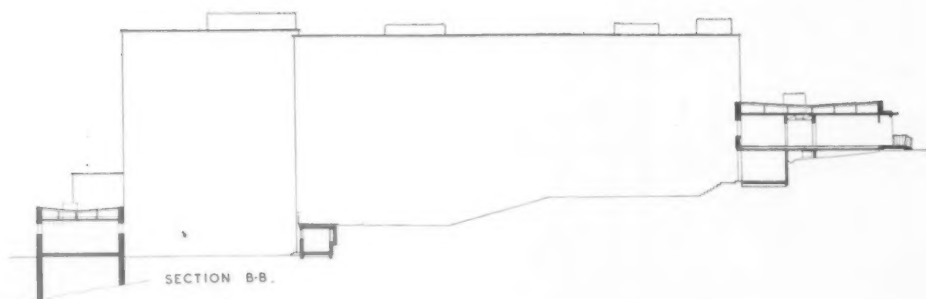


THE new Children's Clinic at Bergen is a gift from Sweden to Norway in commemoration of the liberation. It stands on the hillside opposite the main entrance to Haukeland's Hospital, as near as possible to the X-ray wing and is connected with the hospital by means of a subway which is to be extended to the women's clinic and future kitchen and laundry buildings.

The clinic has 92 beds, 69 for medical and 10 for psychopathic cases with 13 in a separate wing for quarantine cases. The hospital consists of a main block from east to west and two lower wings from north to south at either end. The main building has six storeys in the west but only four at the east owing to the rising level of the ground. The east wing with the 13 quarantine beds joins the third floor of the main building. Beneath this wing is a covered terrace on ground level in front of which is a protected playground. On a slightly higher level is another playground for children from the psychopathic department.

All laboratories, research rooms, physicians' rooms, library, writing room and undergraduates' laboratory are on the first floor. The four upper floors of the main building contain the wards.

Heating and steam is supplied from the central boiler house of the hospital. Central ventilators on the roof draw in pre-heated air and expel used air. The clinic is equipped with light signals, local telephones and radio.



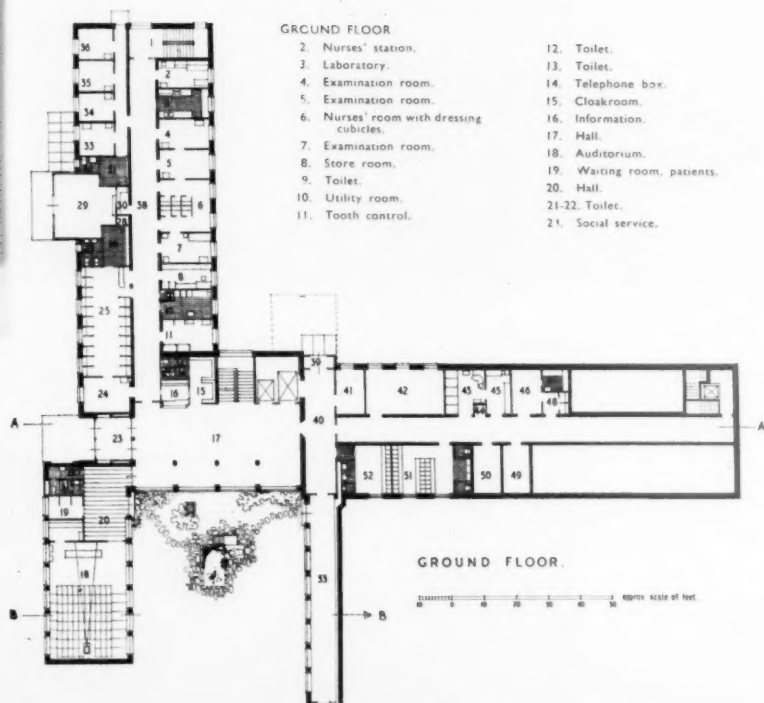
C H I L D R E N ' S C L I N I C , B E R G E N



1st FLOOR

- | | | |
|---------------------------|------------------------------|---|
| 100. Stairs. | 117. Assistant professor. | 133. Bandage preparation and autoclave. |
| 101. Research. | 118. Library. | 134. Cold storage. |
| 102. Laboratory. | 119. Students' writing room. | 135. Entrance. |
| 103. Dish washing room. | 120. Conference room. | 136. Goods reception. |
| 104. Laboratory, faeces. | 121. Physician. | 138. Dry store. |
| 105. Laboratory, urine. | 122. Entrance. | 139. Passage. |
| 106. Laboratory, special. | 123. Doctor on duty. | 140. Dish washing. |
| 107-108. Store room. | 124. Corridor. | 141. Janitor. |
| 109. Laboratory, blood. | 125. Dental out-patients. | 142. Kitchen. |
| 110. Conference room. | 126. Sterilizing. | 143. Office. |
| 111. Cloakroom. | 127. Laboratory. | 144. Staff room. |
| 112. Hall. | 128. Basic Metabolism. | 145. Bed patients' waiting room. |
| 113. Lecture room. | 129. Electro cardiograph. | 146. X-ray. |
| 114. Waiting room. | 130. Developing room. | 147. Control room. |
| 115. Professor. | 131. Cleaners' room. | 148. Dark room. |
| 116. Examination room. | 132. Bureau. | 149-151. Head nurses' residence. |
| | | 152. Housekeeper's office. |
| | | 153. Archive. |
| | | 154. Head nurse's office. |
| | | 155. Corridor. |
| | | 156. Passage. |

FIRST FLOOR

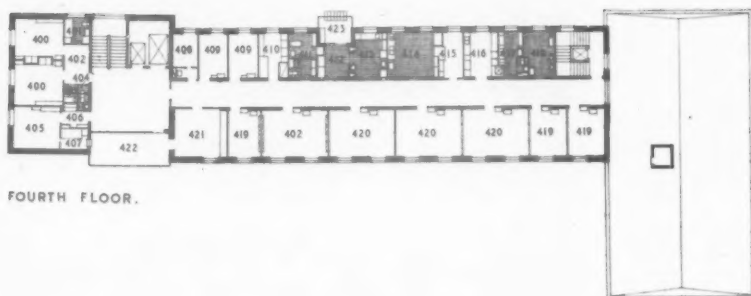


GROUND FLOOR

- | | | |
|---|-----------------------------|---|
| 2. Nurses' station. | 12. Toilet. | 25. Waiting room with boxes and reception desk. |
| 3. Laboratory. | 13. Toilet. | 26. Cloakroom. |
| 4. Examination room. | 14. Telephone box. | 27. Toilet. |
| 5. Examination room. | 15. Cloakroom. | 28. Telephone box. |
| 6. Nurses' room with dressing cubicles. | 16. Information. | 29. Nurse. |
| 7. Examination room. | 17. Hall. | 31. Cloaks. |
| 8. Store room. | 18. Auditorium. | 32. Toilet. |
| 9. Toilet. | 19. Waiting room, patients. | 33. Isolation. |
| 10. Utility room. | 20. Hall. | 34. Isolation. |
| 11. Tooth control. | 21-22. Toilet. | 35. Isolation. |
| | 23. Social service. | 36. Isolation. |
| | | 38. Corridor. |
| | | 39. Ambulance entrance. |
| | | 40. Corridor. |
| | | 41. Ambulance receiving room. |
| | | 42. Air conditioning room. |
| | | 43. Soiled linen. |
| | | 44. Refuse. |
| | | 45. Rinsing soiled linen (cleaning diapers). |
| | | 46-48. Photography. |
| | | 50. X-ray machine. |
| | | 51-52. Students' locker room. |

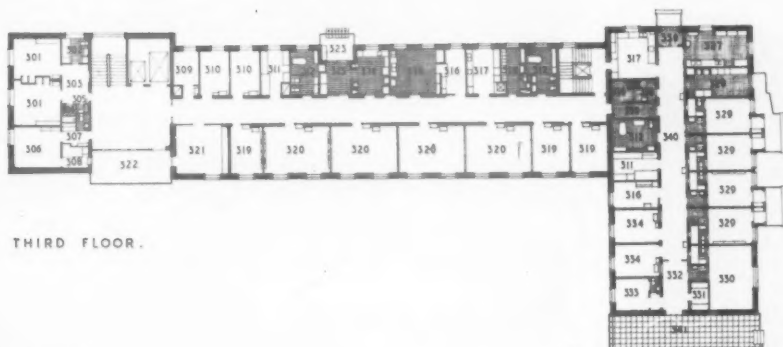
GROUND FLOOR.

Approx scale of feet



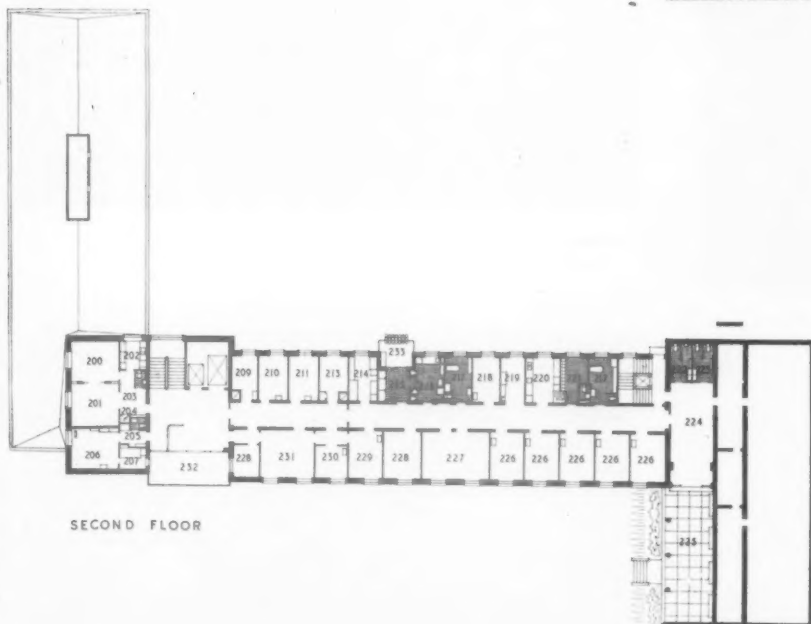
FOURTH FLOOR.

- 4th FLOOR
SMALL CHILDREN, 1-5 YEARS.
400-404. Mothers' residence.
405-407. Nurses' residence.
408. Conference room.
409. Isolation.
410. Store room.
411. Bath.
412. Drying room.
413. Utility.
414. Treatment room.
415. Nurses' station.
416. Serving kitchen.
417. Nurses' toilet.
418. Light.
419. Patients' room.
420. Patients' room.
421. Play room.
422. Sun balcony.
423. Balcony.



THIRD FLOOR.

- 3rd FLOOR
OLDER CHILDREN, 5-16 YEARS.
301-305. Mothers' residence.
306-308. Nurses' residence.
309. Conference room.
310. Isolation.
311. Store room.
312. Bath.
313. Drying room.
314. Utility room.
315. Treatment room.
316. Nurses' station.
317. Kitchen.
318. Nurses' toilet.
319. Patients' room.
320. Patients' room.
321. Play room.
322. Sun terrace.
323. Airing balcony.
327. Treatment room.
328. Utility room.
329. Patients' room.
330. Patients' room.
331. Store room.
332. Corridor.
333. Patients' room.
334. Patients' room.
335. Passage.
336. Dressing room.
337. Shower.
338. Dressing room.
339. Entrance.
340. Corridor.
341. Sun terrace.



SECOND FLOOR

- 2nd FLOOR
PSYCHOPATHIC CHILDREN.
200. Mothers' dining room.
201. Mothers' living room.
202. Kitchen.
203. Hall.
204. Janitor.
205. Entrance.
206. Nurses' room.
207. Sleeping alcove.
209. Test examination's room.
210. Isolation.
211. Isolation.
213. Test examinations room.
214. Store room.
215. Drying room.
216. Utility room.
217. Bath.
218. Isolation.
219. Nurses' station.
220. Serving kitchen.
221. Nurses' toilet.
222. Toilet for boys.
223. Toilet for girls.
224. Hall.
225. Loggia.
226. Patients' room.
227. Living room.
228. Play room.
229. Test examination.
230. Examination room.
231. Physician.
232. Sun balcony.
233. Airing balcony.

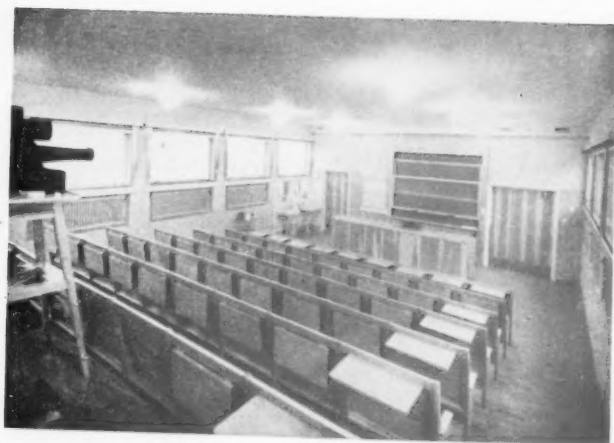
ARCHITECT: GUSTAF BIRCH-LINDGREN

C H I L D R E N ' S
C L I N I C

THE ARCHITECT and Building News, April 13, 1951



The Main Hall

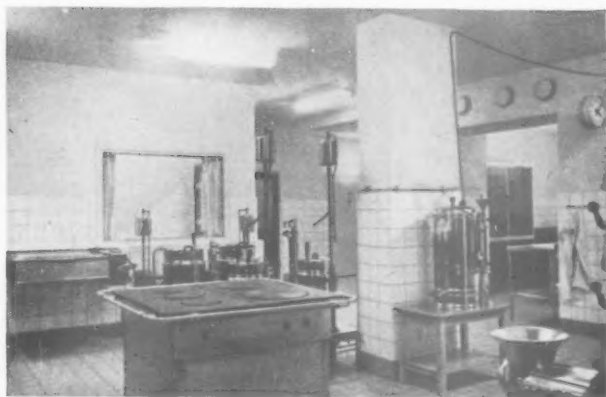


Lecture Room

Playroom



BIRCH-LINDGREN
OFFICE



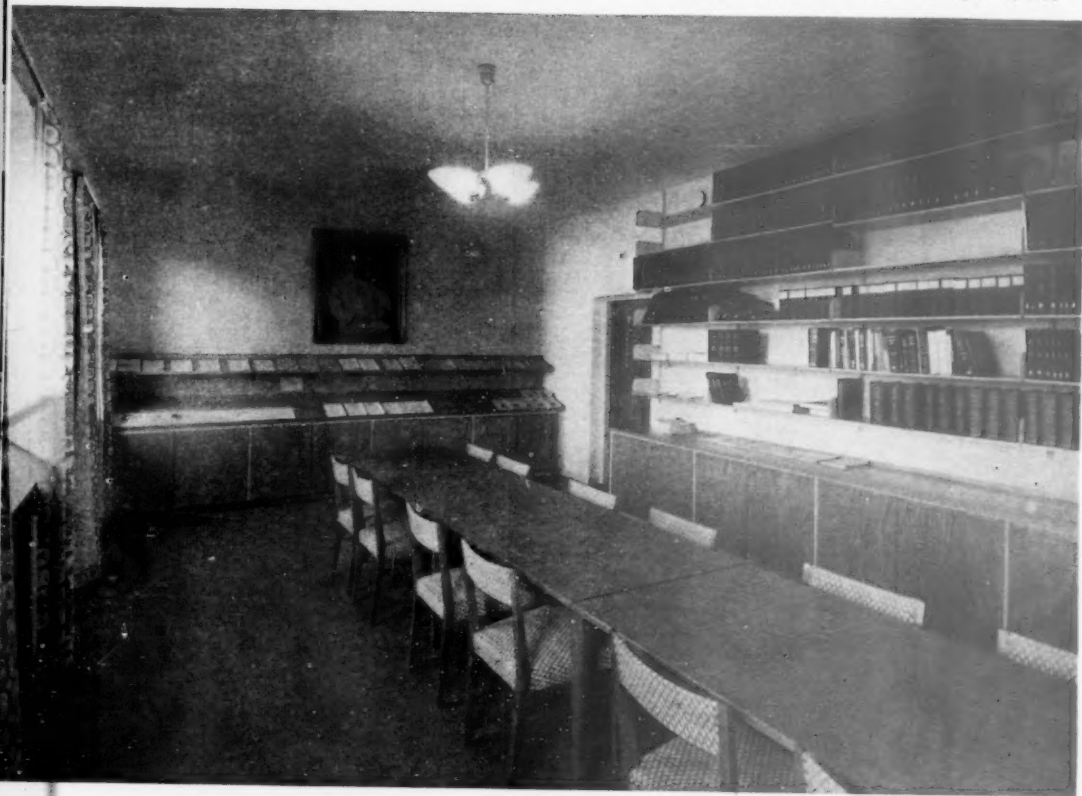
Above: Kitchen

Below: Serving Kitchen



Laboratory



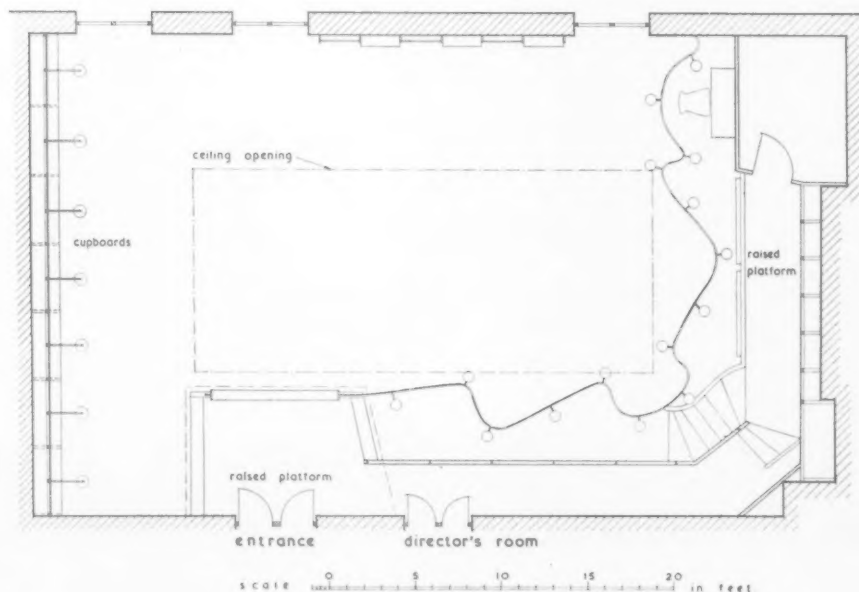


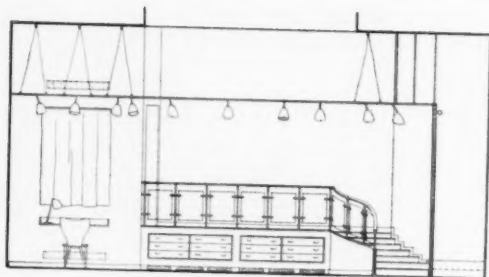
Children's Clinic, Bergen. Above, the Library on the 1st floor, and below, approach to the main entrance.



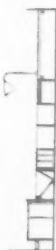
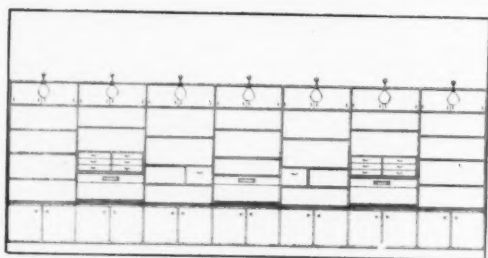


NEW SHOWROOM ST. GEORGE STREET, W.I.
architect: DENNIS LENNON, M.C., A.R.I.B.A.



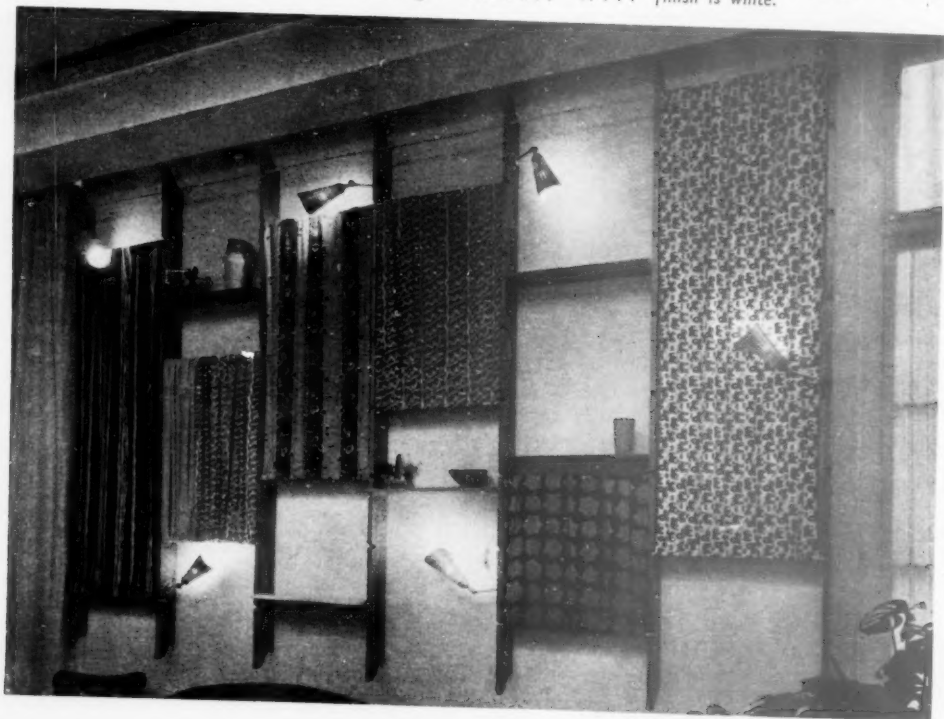


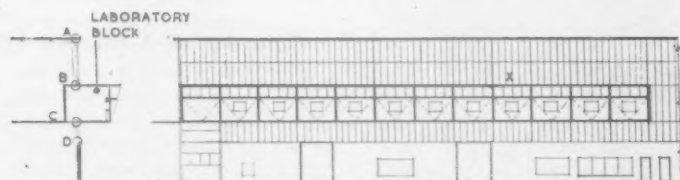
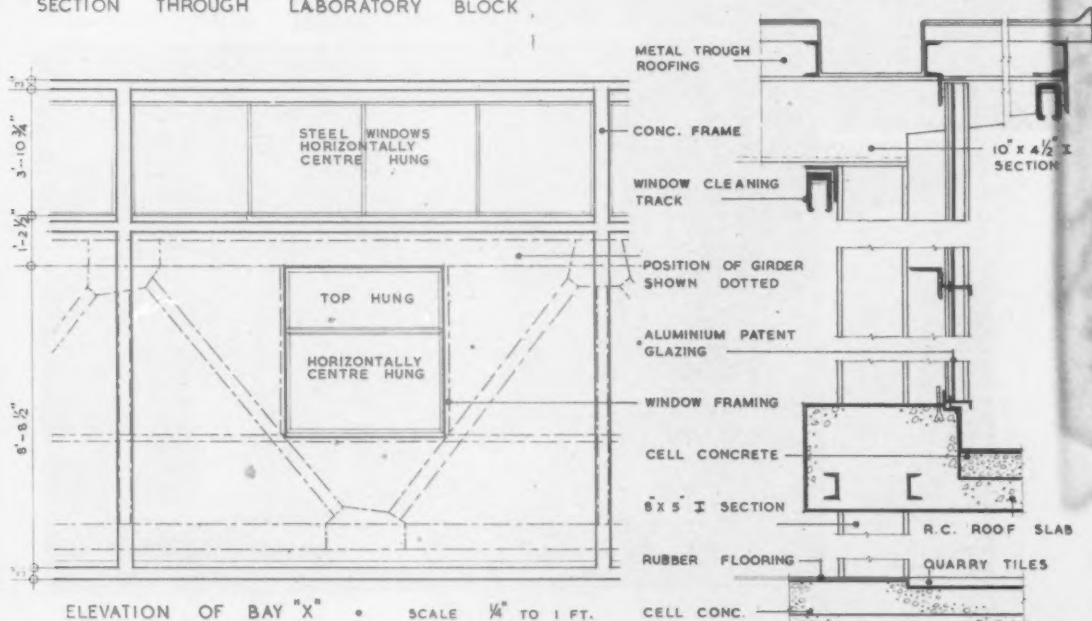
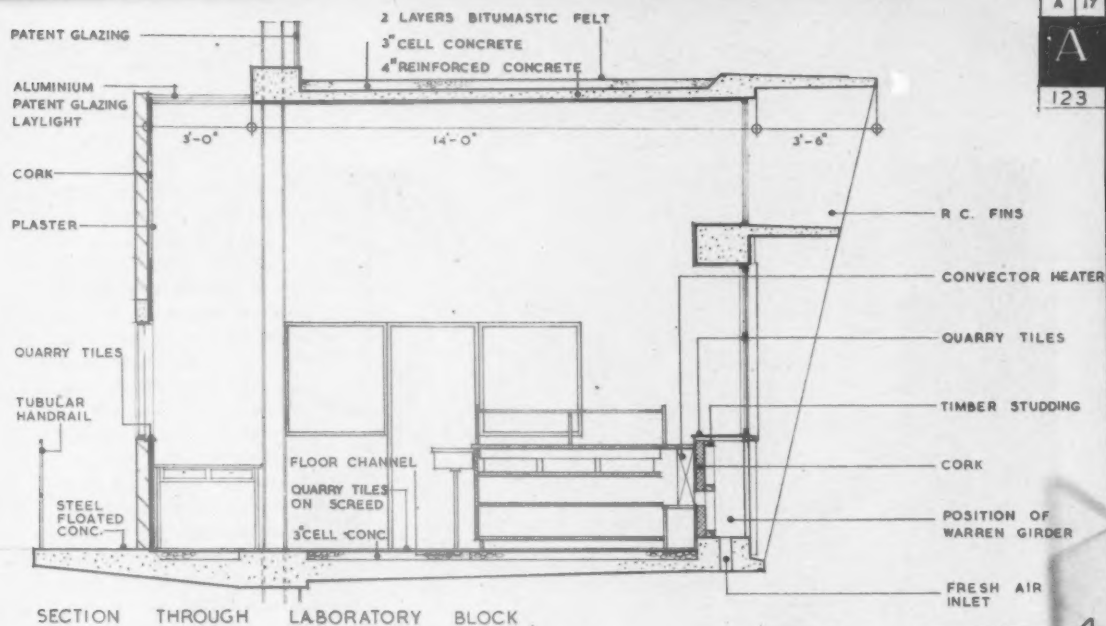
Elevation of the platform wall and elevation and section of the display fixture facing it at the opposite end of the room.



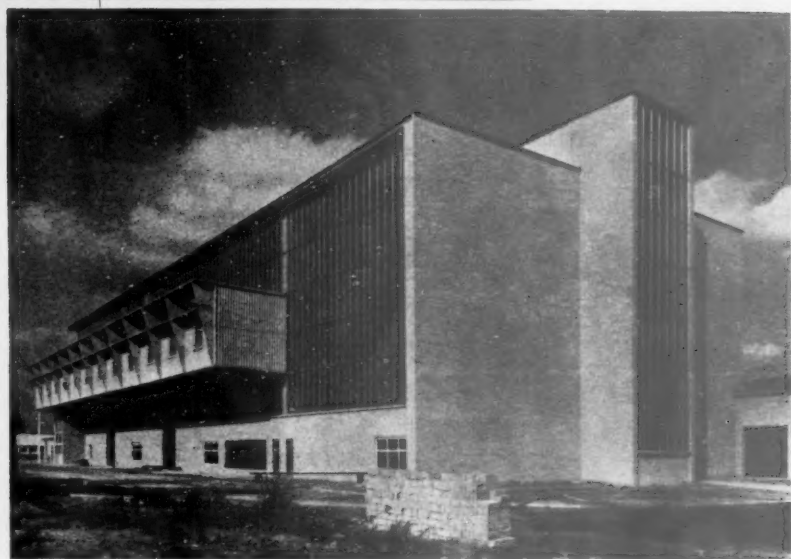
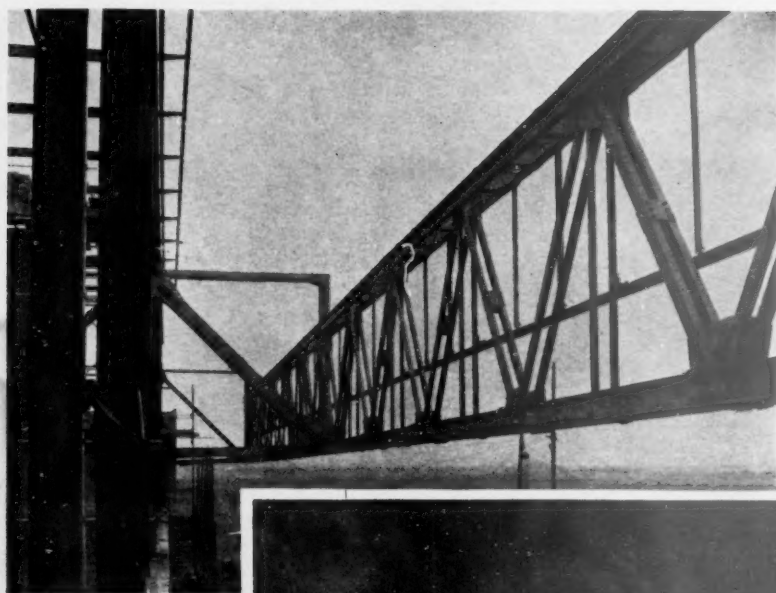
The view below shows the removable display fitting between two of the windows. The wood is light and dark mahogany. Light fittings are of brass, to the architect's design. The wall finish is white.

NEW SHOWROOM. St. George Street, W.I.





SECTION A, B, C & D
 SCALE • $\frac{1}{4}"$ TO 1 FT



LABORATORY UNIT, DUXFORD
ARCHITECTS: OVE ARUP & PARTNERS

THIS new showroom was completed recently at Horrockses premises at 15 St. George Street, Hanover Square. The room was designed with two purposes in view. It was to be used as a showroom for fabrics and as a setting for dress shows with space for 200-300 visitors. The floor space therefore had to be kept free of fixtures. A removable fitting occupies a space between windows on the walls facing the entrance, while a display fixture with shelves, cupboards, drawers and pull-out counters, runs the full length of the wall to the left. At the opposite end of the room is a raised platform for mannequin parades with one approach screened off for models to retire to change their clothes.

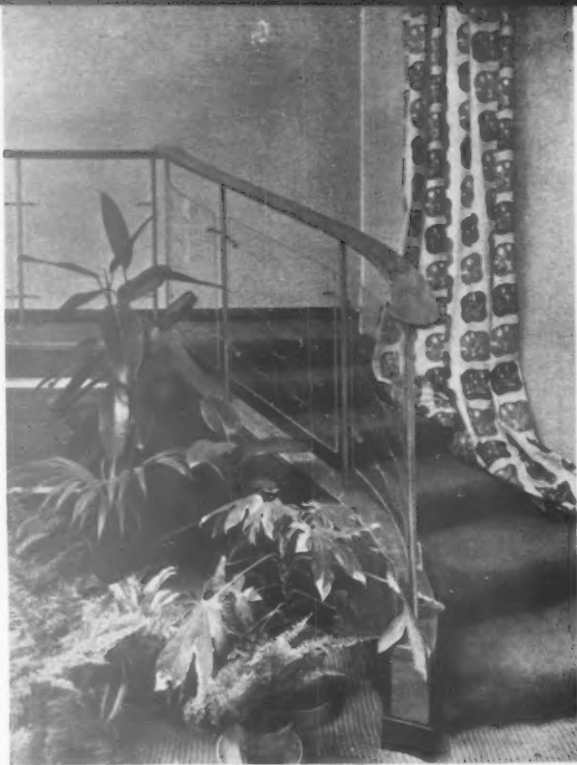
Most of the dress shows would be of summer frocks, so the scheme for decoration and furnishings is a skilful blending of bright colours. The flower garden effect of this is most successful, particularly when sunlight filters through the slatted screen which hides the existing laylight in the centre of the room.

The General Contractors were David Esdaille Ltd.

The stairs to the platform (top picture) are carpeted in pale blue grey. The wall back of the platform is finished pale yellow, while the screen wall is pale brown grass paper. The balustrade panelling is Perspex with an engraved pattern; the handrail is natural finished mahogany.

The display fixture with cupboards and shelves, is framed in dark mahogany with small drawers in light mahogany and others painted white gloss. Backs of shelves are finished a dark green colour and the wall above, pale brown grass paper.

FOUR





*THE ARCHITECT and Building
News, April 13, 1951*

Entrance to the showroom is from a higher level and a raised dais with steps down either side solves this problem where a flow of people had to be catered for. The models platform and display lighting make an interesting view from this point.

Colours and Finishes: Carpet to main floor—pale green with white stripes. Carpet to display platform and dais—pale blue grey. Ceiling—pale blue. Light fittings—brass or painted white. Window wall—white. Curtains to windows—pale yellow. Screen to laylight—natural wood slats in white painted wood frame. Furniture—light and dark mahogany with fabric coverings coloured bottle green, pale blue, pale cherry red, yellow and patterned.



NEW
SHOWROOM
St. George Street, W.1

architect:
DENNIS LENNON
M.C., A.R.I.B.A.



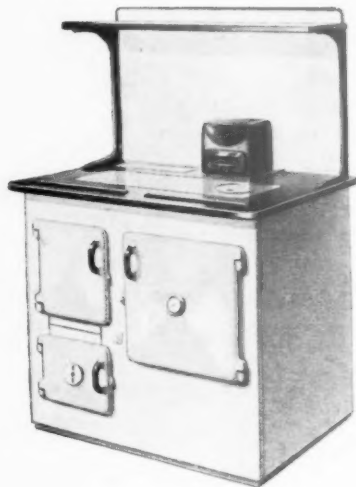
THE DAIMLER
RADFORD WORKS, COVENTRY

Architect: Laurence Williams, F.R.I.B.A.

HOPE'S ALUMINIUM PATENT GLAZING

HENRY HOPE & SONS LTD
SMETHWICK, BIRMINGHAM AND 17 BERNERS STREET, LONDON, W.1

On Stand B.308, B.I.F. 1951



People will talk about this CROMFORD—latest from Glow-worm Boilers—now ready after exhaustive practical tests. Look for the elegant finish, ask about its performance in relation to your own needs and you will see how the new CROMFORD is yet another leader in its class.

CROMFORD

GLOW-WORM BOILERS LTD · MILFORD · Nr. DERBY

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POINTS FROM PAPERS

City Planning
in America

Outline of a talk given at the Planning Centre on April 4 by F. J. OSBORN, Chairman of the Executive of the Town and Country Planning Association.

ON my return from America recently after my second three-months' tour I intended to put together what I could distil from the hogsheds of books and typescripts with what I could decipher from my travel notes. I have made a start, of course adding to the paper-flood in the process. It looks as if by the time I have finished all my facts will be out of date. So this talk is a mere interim affair, vamped up on the basis of very incomplete turlurfing through documents and a very selective memory.

I have visited 11 of the 12 largest city agglomerations in the U.S.A., and several of the largest in Canada, besides a lot of smaller places of most of the distinguishable types.

There are things good and bad—immensely good and stupendously bad—in great cities. In the New York Public Library, for example, I was for the thousandth time excited by the wonderful cultural possibilities given by the assembly of millions of people in one region. You couldn't have the New York Library without the millions. But in the negro quarter of Harlem and in the factory district of Lower Manhattan I was dominated by the sense of the awful price paid for these cultural possibilities. The environment of most of those millions is so utterly depraved as to destroy the individual framework for any decent culture at all.

Behind the rather pleasant facade of a street in San Francisco, actually named Golden Gate, I saw families living in as dark and crowded a slum as I have seen anywhere. And within a narrow-shot of the majestically-situated Capitol of Washington there are decaying slums in which very probably many who serve that temple of Government live.

Thus in American cities, as in London and Birmingham, I was driven back to this simple generalisation: the association and co-operation of millions of people of diversified interests and skills is the basis of our highly-developed civilization, but the city form we have chosen or drifted into for this association and co-operation is radically wrong.

America is a democracy in reality as well as in ideal. And in any democracy based on the universal franchise the tendency must be towards such neces-

sary governmental action as will ensure that everyone has a living income, decent living conditions, and reasonable security. The reason why America has not moved so fast as Europe in social welfare provisions is very simple: it is a far richer country—a country where the poor are relatively rich by European standards. Where most people are fairly well off, only a few very logical theorists care if some people have a great deal more wealth than others. For most people that situation adds a certain excitement to life—because you never know: you might have a break and make a packet yourself; or if you are a girl you might become a movie star or marry the president of a steel corporation.

And if you live in a slum, that may be only temporary. Some day you will have a ranch-type house in a suburb and drive to it in your own Chrysler—or at least a Plymouth.

But if lots of people are in slums and can't get out, something, Americans feel, must be done about it. There is a strong and growingly successful movement for public housing. Even the brake on the movement is not based merely on the theory of individualism. The argument of the anti-housing movement is that if private enterprise can continue building at its present colossal rate—over 1,000,000 houses a year—there will be a filtering up of the less well-off into houses vacated by the better-off, and soon everyone will reach a standard of at least decent housing.

Of course that would not solve the great-city congestion problem. Americans in general have not yet understood that problem. We can't boast that our own public have understood it either. One of the major tasks of the planning movement there, as here, is to show the necessity of some amount of public control of land-use to the proper solution of the housing problem, in which everybody is interested for himself if not for others.

So far, however, the most appealing argument for planning in America is that every city is being choked to strangulation by a constantly growing traffic. You can also interest Americans in the waste of time and money in daily travel between home and work, and the reduction of leisure and loss of productive efficiency that an excess of movement involves.

As in Europe, however, the first reaction to an excess of traffic bringing streets almost to a standstill is the construction, at vast expense, of magnificent non-access or limited-access highways from the built-up areas out into the adjoining counties. Not being complete morons, they can see, as we can, that these new roads enable the cities to expand even more rapidly in area and population. But pride in city bigness still prevails.

American factories are brilliantly organised, and each has a planning staff that allots and re-allots space within it, keeps the gangways clear, and continuously adjusts all the depart-

mental space relationships to the ever-changing needs of each. They would not dream of leaving each internal section to scramble for space by force, or bid against each other for it—knowing that would mean sheer chaos. Yet at the factory gates and everywhere outside it, the innumerable interests in a city (departments of economic activity on a larger scale) are doing precisely that. And the chaos is there for all to see; as it is in our own country.

Planning, therefore, up to a certain point, is much practised in the U.S.A.; one may even say it is popular and growing in popularity. Exhibitions are frequent and well attended, and the literature published on planning is lavish beyond our paper-starved dreams.

Planning, however, has not yet been able to tackle the wider and more fundamental issues of urban development—the excessive growth of metropolitan areas, and the inconvenient location of industrial or business areas in relation to living areas. To one of the reasons for this I have already alluded; the problem is not understood. Cities are too big already for their structure to be grasped by popular opinion. And sections of the more instructed public have, within themselves, somewhat conflicting immediate interests—though they could be reconciled. There is, for example, a radical split between housing reformers and advanced planners, on the one hand, and the real estate people and builders on the other. The real estate interest maintains a "million-dollar lobby" in Washington to oppose public housing and municipal redevelopment of central areas; and I think it would also be averse to extensions of planning. This is a pity; there should be no such wholesale ganging up, since planning is necessary for good estate development, private or public.

The main obstacles to comprehensive planning however are in the political set-up. The existence of 48 sovereign states, jealous of federal encroachments on their powers, is an obstacle that constantly yields to proved necessity. But the sovereignty of the city as against the state government is in this field a greater difficulty. There is in most states no power to revise city boundaries without mutual consent; a city cannot annex an adjoining area without the consent of that area. In this country of course we have both marriage-by-capture, whereby one authority can be compelled to merge in another; and shot-gun marriage, whereby, at least for planning purposes, two unwilling authorities can be joined together. We don't often use them, but their existence in the background is useful.

I will also mention the movement for positive new-town building, which may not necessitate regional planning measures; and in particular the interesting measure now before Congress for the dispersal of a large part of official Washington to places 20 miles out of the city—a defence expedient now under active debate.

News of the BUILDING INDUSTRY INTEREST

BUILDERS may be required to state their basic prices for softwood for carcassing and joinery at the tender stage of new contracts and to submit copies of quotations from timber merchants as a result of a circular to housing authorities from the Ministry of Local Government and Planning. The circular suggests that a statement that the merchant or merchants are prepared at the time of the quotation to supply timber of stated quality at the prices cited should accompany the quotation.

This proposal results from the removal of softwood price control which, it is anticipated, will give rise to many problems on housing contracts and will inevitably lead to considerable variations in the prices to be paid by contractors.

The circular stresses the need for full consultation between contractor and local authority before purchases are made.

AN ADDENDUM has been issued to the Cement Economy Memoranda P.1. 31/5 and 6 published by the M.O.W. The purpose of the addendum is to emphasise the need for the quality control of concrete.

This addendum gives brief notes on choice of materials, design of mix, batching, water content and supervision.

EDINBURGH UNIVERSITY is to start work shortly on the building of an examination hall in Chambers Street to replace the Operetta House. The design includes a ground floor room which can be converted into a theatre. Mr. W. H. Kininmonth, A.R.S.A., is the architect.

BUILDERS, CONTRACTORS AND HARDWARE DEALERS will see a greater selection of tools and equipment relevant to their trades at the Canadian International Trade Fair than at any of the three previous Fairs. The sections of the Fair devoted to building materials, heating and plumbing equipment, etc., are developing rapidly and cover almost every phase of the building and hardware trades. Plant machinery, machines for making plain or embossed concrete blocks, and brick and tile moulds are amongst the exhibits of a large English company. In the smallwares section the products of United Kingdom firms cover the whole field, ranging from high grade paints through household hardware to metal stampings. Canadian and German firms are also well represented in these sections. The Fair will open in Toronto from May 28-June 8, 1951.

THE GENERAL ELECTRIC COMPANY LTD. have recently installed a V.H.F. radio communication network for the main drainage department of the Middlesex County Council.

Maintenance of this large system in West Middlesex—an area of 160 sq. miles with a population of 1,400,000—is now carried out by three small gangs of workers supervised by a travelling foreman.

The radio network is a two-way between fixed and mobile stations and has obvious advantages in cases of emergency as well as for routine work on any point of the drainage system.

THE COUNCIL FOR CODES OF PRACTICE FOR BUILDINGS has now issued for comment Code 402.201, "Sprinkler Systems," prepared for the Council by a Committee convened by the Institution of Mechanical Engineers.

The code deals with the general principles for the provision of automatic sprinkler in-

stallations in buildings. In addition to indicating the need to exchange certain information and to compile a time schedule for the installation of the system, the code lists the requirements for the various fittings and components, and refers to the British Standards where relevant.

The design section includes general information on the installation of the three types of systems—the wet-pipe, alternate wet- and dry-pipe and dry-pipe systems. There are recommendations regarding the number, position and operating temperatures of sprinkler heads, the operation of alarms, special precautions for systems liable to freezing, pressure gauges, valves and supply connections, piping, multiple-jet sprinklers and water supplies. There are also recommendations on systems suitable for dealing with oil fires.

Information is given on the actual work of installing the system, and on the regular tests necessary, including weekly and quarterly inspections.

A section of the code deals with maintenance.

The code is in draft form and is subject to amendment in the light of comments which should be submitted by May 7, 1951. Copies may be obtained from the British Standards Institution, 24/28 Victoria Street, London, S.W.1, price 3/-, post free, reference CP (B) 1003.

THE BOARD OF TRADE announce that they are prepared to receive applications for the importation of worked granite from Finland, following the conclusion of Anglo-Finnish trade discussions.

Applications for licences to import such worked granite should be made on form ILB/A to the Import Licensing Branch, Board of Trade, Romney House, Tufton Street, London, S.W.1, not later than April 26, 1951.

Applicants who were granted similar Import Licences during 1950 must enclose with their applications a statement showing the c.i.f. value of granite imported against the licences.

Applicants who did not hold licences to import in 1950, should submit with their applications evidence of firm offers from suppliers, e.g., pro-forma invoices.

No assurance is given that applications will be licensed in full.

MARBLE, rough or rough sawn, not carbonised and not pitted is now added to the list of goods which may be imported without individual licence from the usual "liberalisation" list of soft currency countries.

A NEW COMPANY, the Société des Revêtements Cemtex, S.A., has been formed, with an issued share capital of 100,000,000 francs, by the Dunlop Rubber Co. Ltd. in conjunction with the Société Anonyme des Pneumatiques Dunlop, France.

The company will operate in France under licence from Semtex Ltd., a Dunlop Company, as flooring and decking contractors, and has already begun, at its factory at St. Maurice des Fossés, near Paris, the manufacture of thermoplastic tiles similar to the sematic decorative tiles of the English company.

RISE IN HOUSE PRICES was the subject of an article in the *Financial Times* recently which stated that available evidence points in the direction of higher and advancing prices.

Funds provided by building societies play a considerable part in determining the general level of values since 60 per cent. to 70 per cent.

and in some areas as many as nine out of ten purchases are assisted.

Given the most favourable interpretation of the future it is clear, states the article, that recent mortgage expansion is due to slow down. The effective demand for houses will, in some degree, be curtailed however by the difficulty borrowers will find in raising larger deposits. As a result any rise in values will at least continue to lag behind general price level.

FIRE EXTINGUISHING AGENTS and their toxic hazards are the subject of an interesting article in the F.P.A. Journal No. 12. The Journal also contains photographs of faulty hearths—a common source of fire in old buildings.

THE RATE OF EXPORT of semi-manufactures of copper and copper alloys will be limited, during the three months from April 1 to approximately half the rate prevailing in the first six months of 1950. All applications will be considered on their merits, and due weight will be given to "conversion value," to the established pattern of trade and to the importance of the end use.

Before June 30, 1951, a further announcement will be made about the rate of exports thereafter.

The export of semi-manufactures of zinc will be permitted only in exceptional circumstances.

Applications for export licences should be addressed, fully documented, to the Export Licensing Branch of the Board of Trade, Regis House, King William Street, London, E.C.4.

THE BOARD OF TRADE have made an Order which came into effect on April 9, permitting increases on the maximum prices of sulphuric acid, due mainly to the advances in the world prices of sulphur and pyrites and of freight rates. The additions to maximum prices are 26s. 6d. per ton on weak acid (77% H_2SO_4) and 33s. 9d. per ton on strong acid (more than 84.02% H_2SO_4).

A TRADE AGREEMENT between the United Kingdom and Pakistan was signed in Karachi on April 2.

The new agreement by its exchange of tariff preferences, will foster trade in both directions between the two countries. Pakistan exporters will receive preferences on tea, dressed and undressed leather, bones, skins, oil-seed cake and meal, carpets and sports goods when imported into the United Kingdom. United Kingdom exporters will receive preferences on certain iron and steel products, chemicals, paints and engineering products when imported into Pakistan. Details will be published in the Board of Trade Journal.

The new agreement comes into force immediately and has an initial validity of eighteen months.

THE BASIS PRICES OF COPPER were advanced on April 2 by £8 per ton to the following: Plain Plates, £261 per ton basis with usual trade extras; Rods, £258 10s.; Sheets over 4 ft., £260.

These prices are nett and not subject to discount.

COUNCILLOR STEPHEN HUDSON, President of the National Federation, is to address the April meeting of the Council of the L.M.B.A. on April 19. At lunch before the meeting Mr. Dudley F. Cox, President of the L.M.B.A., will preside.

Keep workers warm



fit "INSULIGHT" double-glazing units

Workers can have more warmth and comfort from improved thermal insulation, when "INSULIGHT" double-glazing units are used. These units reduce heat losses, and thus cut heating costs. Used in conjunction with air-conditioning plant, the load is reduced and power saved,

and the initial capital cost is less. The hermetically sealed dry air in the space between the two glasses of the units restricts condensation and keeps the inside surfaces free from dirt. There are still only two surfaces to clean. The units can be fitted without difficulty.

Send for the booklet about their advantages and the methods of fixing.

Consult the Technical Sales and Service Department at St. Helens, Lancs., or Selwyn House, Cleveland Row, St. James's, S.W.1. Telephones: St. Helens 4001; Whitehall 5672-6. *Supplies are available through the usual trade channels.*



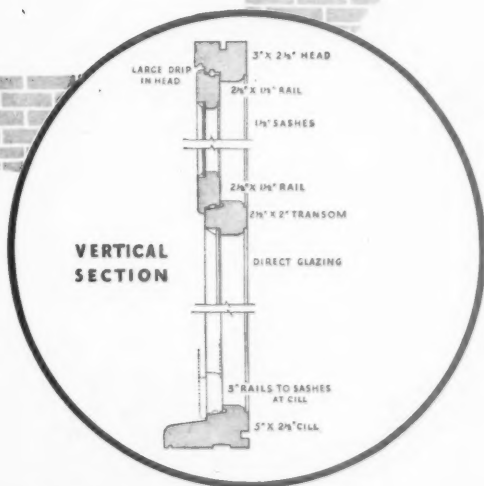
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The 'Registered' design of a Norris Standard Plus Window is clearly shown in the illustration above.

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GOOD, BAD OR INDIFFERENT?

No. 31—By A. FOREMAN

Thoughts in a Showroom.

LAST week I was in a building merchant's showroom making various purchases for a job and I was struck by several matters which seem to me to need attention in these notes.

Firstly when selecting paint I was troubled by the various names used by different paint makers to describe the glossiness of their products. From the description on the tins one had little idea of the degree of gloss, without testing the paint, unless it happened to be from a maker whose products one is using constantly. What is "high gloss" to one firm is "enamel", "hard gloss", "super gloss", etc. etc. to other firms and similarly at the other end of the scale are "matt", "egg-shell gloss", "egg-shell matt" and so on. Would it not be possible for the paint makers, at least the reputable ones, to get together with B.S.I. and agree on some standard method of measurement of gloss and then fix limits up a scale to correspond with specific names. This action would simplify considerably one of the difficulties between painters, builders, architects, stockists and householders, all of whom have to deal with matters relating to the degree of gloss of paints.

Secondly, I have experienced troubles with the words "distemper", "washable distemper" and "water paint" as their use seems to vary between producing firms. There is a B.S., namely 1053, which seems to settle the matter if firms would use the descriptions given in it on their cans and drums and perhaps say so just to help the purchaser.

Thirdly and also a paint matter. What a help it would be to merchants and users if there could be some up-to-date and adequate B.S. for all the paint materials in common and quantity use in the normal building industry. I appreciate that there are difficulties, especially as the varieties and mixtures are legion, but nevertheless there are certain types we use in large quantities which are basically similar. I should like to see some minimum performance requirements or agreed minimum formulations, as are most suitable for each type, laid down and then for the makers to guarantee by means of a marking scheme, perhaps in conjunction with B.S.I., that their products comply. Branded names are some guarantee but unless they are related to some basis of measurement they are of little value to the user, especially as a basis of comparison of quality and price. I know bad application can spoil any paint, however good, but not all our troubles are bad application; if we knew with certainty the quality of a paint then we should learn more about our troubles of application. Also there are those who desire to buy by tender and specification and they, with few exceptions, have, at the moment, no real guide.

Fourthly, a matter which concerns distributors. The Ministry of Health has advocated constantly, in the Housing Manual and in circulars, the use of materials and components complying with British Standards and in fact certain B.S. are made more or less obligatory for state-aided housing. This is all very well but most of us select and buy many of our needs through builder's merchants and although we are probably willing and desirous of co-

operating there is one obstacle. This difficulty is that it is only seldom that a builder's merchant's list or catalogue or the notices on the goods displayed in the showroom tell us which articles comply with B.S. In fact it seems sometimes that merchants try very hard to put one off buying B.S. goods in favour of others, presumably as standard goods tend to have standard profits. On the other hand many manufacturers are much more helpful as references to B.S. are quite frequent in their advertising, although many more might do the same. All of us are vitally interested in reducing costs of building without lowering quality and surely a contribution would be achieved by mass production of standard goods on a large scale, especially now that conditions seem to be getting worse.

I have yet to see a merchant's catalogue devoted to goods complying with B.S., although it would seem to be worth while now that so many buyers are having to comply with increasing numbers of B.S. quoted in specifications and quantities: this would be just one more of those helpful services which merchants can provide and it should not cost them nearly as much as some of the other services they provide. Also they ought to be able to benefit from a reduction in the variety of their stocks and large quantities when purchasing.

On several occasions when examining goods at a merchant's I have had a need to check that what was offered complied with B.S. but the merchant was unable to tell me if they did or to produce a copy of the B.S. so that we could check the goods on the spot. I am expected to follow specifications

calling for compliance with B.S. and the least the merchant can do is to provide one with an assurance that what he offers does comply and produce a copy of the B.S. for checking, if necessary.

The fifth point concerns buying goods to B.S. It would help greatly, those of us responsible for supervision, if all makers of goods complying to B.S. would mark their products to indicate this as some do already. Personally I would like to go a step further with these goods which it is difficult to check and ask makers to adopt the B.S. certification marking scheme as already used on some goods such as clay pipes and water taps. The smaller builders, clerks of works and architects cannot possibly carry out many of the essential tests now that materials and components are so complicated as they have no facilities nor would such facilities, if acquired, be used sufficiently often to justify their cost and it is not convenient to keep calling on the specialized testing houses. Makers have, or should have, to carry out constant routine testing for control of their works so if this information could be passed on to the user by means of a B.S. controlled marking scheme it would be of infinite benefit and, incidentally, a good sales policy.

My sixth and last point is a personal grouse. Too many of my friends know I have, and keep up-to-date, a set of B.S. covering building and I think it is high time a lot more did the same as I am spending too much time on the telephone answering their questions as to what is wanted to comply with some B.S. It does not really cost so much and the cost is a trade expense for tax purposes.

ELECTRIC WATER HEATING

No. 1.—GENERAL

By J. Mortimer Hawkins

For the past 30 years the heating of water by electricity for domestic and business premises has been gaining popularity.

During the latter war years, progress was retarded by more vital needs. Since the end of the war, despite great potential demand, the imposition of a heavy Purchase Tax on all domestic electric water heating apparatus has had its effect. Even under present conditions however, this form of heating has the advantage of cleanliness and adaptability.

Economy in running costs depends to a large degree on correct installation and knowledge of the purpose for which different appliances are designed. The object of this series of articles is to demonstrate that, with correct installation, electric water heating can be attractively economical.

Electric water heaters can be roughly classified as follows:

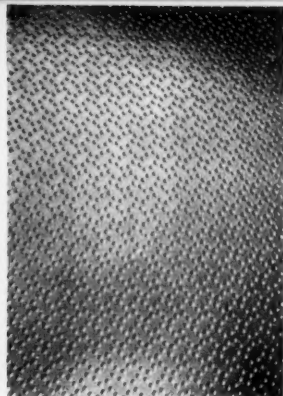
(a) Self contained storage water heaters.
(b) Immersion heaters and circulators.
The first group are complete automatic electric water heating tanks, consisting basically of an inner water container, in which are the heating elements, automatic cut out or thermostat and an outer metal container.

Between the two containers is a thermal insulator, usually consisting of granulated cork. The storage heater will provide hot water automatically to one or more points, and in quantities depending on the needs of the various taps, and the size of heater installed.

The latter type of heaters are used mainly for converting a coal fired water heating system to one of coal-electric. This form of heating is more popular in the northern parts of Great Britain, where as a result of cheaper coal, coal fires are more widely used for space heating and water heating. Generally speaking, in the north two thirds of the electric water heating installations use immersion heaters or circulators, and one third storage heaters. In the southern part of the country these figures are reversed.

When considering the use of electric water heating in designs for new houses, flats, etc., it will usually be found that the self contained storage water heater will be the more satisfactory method.

(continued on page 433)

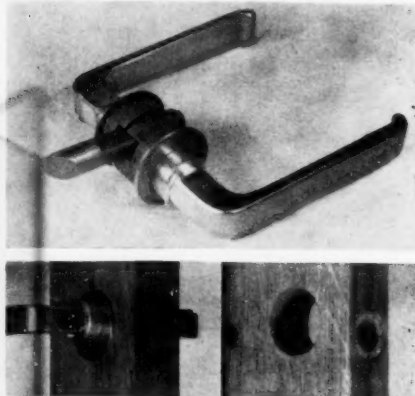


FINISHES, GLASS AND GLAZING

D1/2

The Festival Pattern Group organized by the Council of Industrial Design (see MOSAICS 6/3/51) includes the firm which has recently produced this new figured rolled glass. The dot pattern is derived from a crystal structure diagram. The dots are raised above the glass surface providing texture and an attractive finish which when obliquely lit gives life to the glass.

This glass was shown for the first time at the Ideal Home Exhibition and will be seen at the Festival of Britain, South Bank in the Regatta restaurant. Designer was J. Beresford Evans.



FITTINGS, DOOR FURNITURE

C3/5

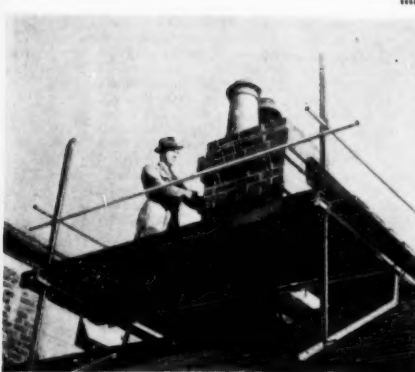
The lock illustrated is a French invention, now manufactured in this country under licence. The lock is made in two patterns: for house doors and cupboard doors. Simplicity of fixing is a principal claim made for the lock since all that is required before fitting is the boring of two holes, 1 1/8 inch diameter for the barrel and 1/2 inch for the bolt. Templates are provided for correct centring of the holes. The lock can be either spring operated or dead-locked from either side. The lever handles are die-cast and plated. For drawers and cupboards the handles are replaced by a removable flat key. It is claimed that the locks can be fitted in half a minute. Illustrated fitting instructions are supplied by the distributors.



SERVICES, PLUMBING

B4/5

The prototypes of this bib-cock were first produced in 1950. The tap operates by push pull action of the control knob. The tap is washerless—washers being replaced by synthetic hydraulic seals. Models at present are manufactured in the 1/2 in. size. It is claimed that the hydraulic seal prevents "hammer". The tap is 5 1/2 inches long and weighs 1 lb. 9 oz., and may be used for hot and cold water as well as for oily liquids. Finish is chromium plate.



PLANT, SCAFFOLDING

E10/3

The high cost of erecting scaffolding can make the simplest chimney repair an expensive job. The scaffold illustrated is designed to reduce costs not only by saving in scaffold material, but in erection time. The scaffold can be used on chimneys in all usual positions. The cost of the complete equipment which is of course re-usable is £25. The members of the scaffold pin together, each member being drilled with holes at frequent intervals to allow for a variety of applications and roof pitches.

MOSAICS

The names and addresses of manufacturers of any item illustrated in MOSAICS, together with more detailed information relating to their products—including price and availability—will be forwarded to readers on request.

Letters should quote the serial number and be addressed to:

The Associate Editor,
The Architect and Building News,
Dorset House,
Stamford Street, S.E.1.

Please mark the envelope MOSAICS.

INTEREST (continued from page 430)

THE INSTITUTE OF QUANTITY SURVEYORS held their annual dance at the Piccadilly Hotel on March 15.

Proposing the toast, "The Institute" Mr. Alfred Bossom M.P., F.R.I.B.A., said that the nation had, as part of a world-wide plan to ensure peace, entered into an extensive rearmament programme, the success of which would be vital if peace was to be secured.

The very heavy building programme which this would necessitate presented the Quantity Surveyor with a great responsibility and opportunity, since, by reason of his professional knowledge and status, he was able to ensure that this programme was implemented in the most rapid and economical manner—the latter, in the present financial position of the country being a point of no mean importance.

Replying to this toast, the President, Mr. Gregg, said that the Institute had been founded upon the principle and with the aim, that it was perfectly possible for both Professional Surveyors and Contractor's Surveyors to be brought together into one Institute, with the same code of conduct and training for both. This aim it was successfully achieving.

In this connection it would, he said, be fair to say that the Institute was the only body that was implementing to the full the recommendations of the Government Working Party's report on the Industry.

It was true that a great responsibility devolved upon the Quantity Surveyor because he actually controlled the finances of any particular contract, and therefore, indirectly, of the whole Building Industry. The best contribution of the Quantity Surveyor towards increased production would be the speedy release of finance by ensuring that all Interim Certificates were fully valued, that no hidden retentions were created, and that Final Accounts were not delayed.

FEDERATED PAINTS, LTD. (the newly-formed amalgamation of three Glasgow paint manufacturers) have recently placed on the market an etching primer for the preparation of non-ferrous metal and plastic surfaces for painting.

The new primer is supplied ready for use in a single container. It is claimed that there is no gelling action between the etching and varnish media, and that the product can be stored for many months without risk of deterioration.

Tests of the new material have been completed by the major aluminium manufacturers and the Aluminium Development Association has approved and recommended its use.

(continued from page 431)

The position of the water heater in the building should be considered at an early stage of design. It can be uneconomical to add a heater as an afterthought.

It will be appreciated that with electric storage heaters the position is not dictated by chimney flues, as is the case with a coal fired system. The electric heater can be fitted in any part of the house so long as hot pipe runs are kept to a minimum.

Therefore, in private houses the storage heater should be placed nearest to the point at which hot water is most often used. This point is normally at the kitchen sink. Attention to this point will show considerable saving in running costs. It will be shown in a future article how manufacturers have designed a water heater which encourages the use of this position for installation.

The hot water points in kitchen and bathroom may, therefore, be planned close to each other with advantage.

Should the design of a house include the electric/solid fuel type of installation, that is with an immersion heater or circulator fitted in the hot water cylinder for use as an auxiliary form of heating, there are certain points which must have the consideration of the architect or hot water engineer.

These points are of great importance for an installation working at maximum efficiency.

1. The installation should be designed primarily for electric heating.

2. The storage should be positioned so that the most used tap shall be served with the least pipe loss.
3. Preference should be given to short lengths of hot water draw off piping rather than short circulating piping between boiler and storage.
4. One pipe circulation and reverse circulation must be prevented.
5. No draw off piping must be connected to the primary circulation piping.
6. Cold water inlet should be adequately baffled to prevent mixing of incoming cold water with hot.
7. No electrically heated water must be allowed to circulate externally through towel rail circuits, radiators, etc.
8. Secondary circulation must be checked by a stop valve when the immersion heater is in circuit.
9. The storage cylinder or tank must be adequately lagged by having at least 2 inches of efficient thermal insulating material.

All the above points can be taken care of much better if the installation is designed with the building.

In future articles various types of electric water heating installations for providing domestic hot water in an efficient manner for private houses, flats and business premises will be dealt with.

In succeeding articles, Mr. Hawkins discusses the application of electric water heating to (i) Houses, (ii) Flats, (iii) Business Premises.

has been made of American practice and trends in lightweight concrete manufacture and use.

Other Investigations and Surveys

A survey was made in collaboration with the Ministry of Works, the Chemical Research Laboratory and the Paint Research Station of corrosion in steel-framed and steel-clad houses erected in 1920-27, with particular reference to the efficacy of the protection afforded by the treatments applied to steel framing within cavity walls, and with the object of assessing the requirements for future construction.

A survey of building sands has continued in collaboration with the Ballast Sand and Allied Trades' Association. Further co-operative research has been carried out with the British Cast Concrete Federation and the Cast Stone and Concrete Federation, and laboratory tests have been made for the Scottish Council to assess the suitability of certain Scottish limestones for the production of lime. Comparative tests in collaboration with eleven other laboratories have been made on the crushing strength of standard cement mortar cubes to study the performance of the vibration machines now in use. In spite of differences in the design of the machines, the variation in the cube test has been found to be much less than in the tensile strength test formerly employed.

STRUCTURE AND STRENGTH OF MATERIALS

Economy in Steel

The use of welded rigid joints in steel frame building permits an all-round economy in steel, but it also introduces difficulties in design. With rigid joints no single member of the frame can be designed by traditional methods independently of the remainder, and it is commonly supposed amongst engineers that the design of such a structure by elastic methods is exceedingly complicated. For some years the Station has been investigating the possibility of speeding up the procedure without losing accuracy and without sacrificing economy. Modern methods of analysis have been used, which have eventually led to a purely graphical method of design, devoid of mathematical analysis, and sufficiently speedy for the designer-draftsman. The time required to select the section of any member is but a small fraction of the total designer's time, and it is claimed that up to 20 per cent. of steel can be saved thereby. The proposed methods will deal with irregular conditions and are immediately applicable to large buildings.

For single-storey buildings the so-called "plastic" methods of design, such as those being studied by Professor J. F. Baker at Cambridge in which account is taken of the plastic deformation of the steel before it fails, will at present give the greatest economy, but many difficult problems have to be overcome before such methods can be used for large buildings.

It still remains a necessity, however, to study the actual behaviour of a frame in a complete building. When any substantial cladding is present the frame cannot act independently of the cladding, and the actual loads transmitted to the frame are often very different from those assumed in design. It is known from previous tests carried out at the Station that a beam supporting a brick wall ceases to act purely as a beam, and the reduction in steel stress is very considerable. Tests are being carried out at the moment at the new Government offices in Whitehall to investigate the stresses which occur in practice. These are to be supplemented in the laboratory by controlled tests to study the composite action of steel beams, concrete encasement, brick panel walls (with and without openings) and to study

D.S.I.R. REPORT

SUMMARY OF WORK OF B.R.S.

The Report of the D.S.I.R. for 1949-50 mentions nearly a thousand researches, completed or being studied from most industries. It should prove of value as a work of reference on industrial research. As Sir Ben Lockspeiser, K.C.B., F.R.S., Secretary of the Department, has said, small improvements are more valuable at the present time than big advances and the Report shows how many of these small improvements are being made possible by research.

Below we publish extracts from the section of the report dealing with Building Research.

The number of enquiries received on building and civil engineering problems is now approximately 6,000 per year, exclusive of minor telephone requests for information, or of some 10,000 other requests for sources of information or copies of publications. Over half of these 6,000 enquiries come from technical advisers of various kinds (architects, surveyors, engineers and industrial consultants); the remainder come mainly from contractors, clients of the building industry, manufacturers of building materials, and students.

DEVELOPMENT OF BUILDING MATERIALS

The time lag between initial development and use on a considerable scale of new building materials is probably a good deal longer than occurs in other comparable industries. Buildings have to last a long time—very much longer than most other manufactured products—and, to protect their customers, designers and builders have to make sure that repairs and maintenance generally will not become excessive with time. This is one of the reasons for the time lag, because experience has shown that there is no simple routine of accelerated tests to which any or all materials can be submitted; each different type has to be studied separately.

Observations on the weathering of materials are being co-ordinated by bringing

together a number of exposure tests on to a single site. Here, continuous records of the temperature and moisture content of brick and stone built in the test walls will be made to secure, for example, precise information on the conditions under which freezing occurs. A similar site with similar facilities has been provided at the Scottish Laboratory, and correlation of the observations at the two sites with standard meteorological data should assist in the development of an artificial freezing test that will be less unreliable than those hitherto used.

Lightweight Concrete

The work carried out on a lightweight concrete affords a good example of the line of approach followed by the Building Research Station in its studies of building materials. Lightweight concrete can be cut and nailed, and made strong enough to carry limited loads. In addition it is a better insulator than denser and stronger products. All of these properties were well known in the laboratory twenty years ago, as were also many of the ways in which lightweight concrete could be made. Yet development in practice was very slow up to the post-war period. After the war, the requirement for better insulation of houses gave a spur to its wider use, but it also uncovered the need for development research in many different detailed directions. Work recently completed or still in progress includes the operation of a pilot plant to study means of improving the furnace ashes from power stations to make a more reliable aggregate for clinker blocks and to assess the economics of the process, and a pilot survey of a cross section of the concrete block-making industry to help to ascertain the most economical way of making blocks. In addition, thanks to the valuable assistance of the Economic Co-operation Administration, a survey

the importance of workmanship in this connection.

Concrete Quality

The efficiency of structures of pre-stressed concrete, shell roof construction, and reinforced concrete in general, depends not on the steel alone, but also on the quality of the concrete used in association with it. If full advantage is to be taken of new techniques such as pre-stressing, the concrete must be of high strength and of uniformly good quality. A special study has therefore been made of the practical problems associated with the control of concrete quality.

The common method of specifying concrete by strength with limitations either on the minimum amount of cement per cubic yard of finished concrete, or with limitations on the proportions of cement and aggregate, does not allow the engineer to use the available materials to the best advantage to produce the mix most suitable for the work in hand, and neither does it encourage him to economize in cement. If on the other hand the specification for the concrete is based on a minimum strength requirement at a predetermined age, e.g., seven or 28 days, without the limitations referred to above, the engineer is free to design the concrete mix and grade his materials to the best advantage so that the specified strength is quite readily attained, and at the same time cement can be saved.

Quality control in preparing and placing the concrete, with proper supervision of the operations, can ensure that all concrete attains the specified minimum of strength; and it can effect a saving of 20 to 30 per cent. of cement, while not lowering the minimum strength of the concrete. It can alternatively ensure a very much higher minimum strength without an increase in cement, thus enabling designers to assume with confidence, higher strength values in design calculations, and so effect considerable overall economies; while the fact that the concrete is more uniform ensures freedom from bad patches.

SOIL MECHANICS AND FOUNDATIONS

The laboratory and field research in soil mechanics during the year has been mainly concerned with foundation problems in connection with clay shrinkage; a study of the bearing capacity of soils in relation to foundations for large structures; excavations in difficult ground and the stability of earth slopes.

In years of low rainfall, such as in 1949, a considerable number of houses on clay sites are reported to the Station to have been damaged by shrinkage settlement. Observations on four typical sites in South England indicate that the seasonal vertical movements of ground with grass cover may reach nearly 2 in. at the surface, while at a depth of 5 ft. the movement is very small. As an alternative to carrying footings of buildings down to a depth of at least 3 ft. on shrinkable clays, short-bored concrete piles may be used. Loading tests on piles of various diameters and lengths have been carried out on two sites whose soil properties were investigated; in addition a time study was made of the construction operations and was followed by observations on actual jobs.

One of the main problems in connection with foundations for large structures is the estimation of the load bearing capacity of the soil. On the theoretical side a general theory of bearing capacity has been developed for foundations of all types including footings and piles. A series of model loading tests has been carried out in the laboratory on various types and depths of foundations in typical soils and some full scale tests have also been made. The results obtained so far show promising agreement with the proposed theory. In

addition the study of the settlement of structures has also been continued. The estimated settlements of a new large Government office block in Whitehall are being checked by observations with a special water levelling system.

The stability of the bottom of an excavation carried out in water bearing ground is a problem which frequently gives rise to difficulties in practice. A theoretical analysis of ground water seepage into excavations has been made and the problem is being investigated in the laboratory by means of model scale tests in a seepage tank.

The work on the stability of earth slopes has been largely concerned with the investigation with actual failures. The failure of a flood bank for a river diversion led to a field study of the pore water pressures in a peat layer underlying the bank. The results gave a much clearer idea of the mechanism of failure in such problems and emphasized the importance of making observations of pore water pressure during the construction as a guide in controlling the rate of building. Further studies have been made of the application of electro-osmosis, i.e., the flow of water under an electrical gradient, to improve the stability of earth slopes. In collaboration with British Railways a field trial of the method for drying out the centre of a clay bank has been carried out in Scotland with the object of improving the stability of the bank, which had been exposed to flood water, so as to reduce the hazards involved in constructing a new culvert. The culvert has been successfully constructed.

EFFICIENCY OF BUILDINGS

Domestic Heating

The important full-scale investigations on domestic heating, which are being carried out in houses built for the purpose on the experimental site at Abbots Langley are still in progress. But sufficient definite conclusions can be drawn in regard to the small house of the type built by local authorities. Recommendations can already be made on types of construction, insulation, reduction of excessive ventilation and types of heating system designed to give improved efficiency.

Ventilation

Methods have been developed for measuring ventilation in the houses used for the domestic heating studies without interfering in any way with the occupants. The equipment can measure the air-change in any room and, by making the initial concentration equal in all rooms, the air-exchange rate between the house and the outside, or alternatively it can measure the rate of heat loss by ventilation by making initial concentrations proportional to the difference between room and external temperatures.

Sound Insulation and Acoustics

Full-scale sound insulation measurements have been continued in the block of experimental flats at Abbots Langley in which promising laboratory treatments for reducing sound transmission through walls and floors have been worked out in terms of ordinary building practice. The stage has now been reached when the insulation provided by many practical types of construction can be predicted with some degree of accuracy, and any further considerable advance in the subject must come from basic research and a detailed study of the various stages by which sound is transmitted through a building.

Lighting and Colour

The work of the Building Research Station on lighting of buildings and on problems of glare from lighting sources has led to numerous requests for advice on light fittings suitable for use in schools, factories

and offices. Many fittings at present on the market fall short of the standards desirable for comfortable lighting and the view seems to be widely held amongst users that they are expensive. One result of these requests for assistance has been the development of new lighting fittings, suitable for industrial and commercial buildings and schools. These fittings are so designed as to give efficient lighting free from glare and to be relatively inexpensive. Some of them have been patented and installed in some buildings and their further commercial development is being arranged by the National Research and Development Corporation.

An allied problem in which there is considerable industrial interest is the use of colour in factories and the Station has prepared a number of schemes for factory managements based on an examination of the nature of the work involved and of the problems of maintenance. Effective demonstrations of these schemes, e.g., in a woollen weaving mill near Huddersfield, have led to further requests for help in a field where factory owners had previously had difficulty in obtaining adequate guidance.

Building Operations

During the year the work of the Chief Scientific Adviser's Division of the Ministry of Works on user requirements and the economics of building has been transferred to the Department, under the Director of Building Research. Much of this work supplements that of the Building Research Station; other parts, particularly that concerned with user requirements, cover common ground, although the emphasis in the Ministry's work has been on the sociological aspects and in the Station's work on the physical aspects.

Although the conduct of all building research is now the responsibility of the Department, the application of the results remains the concern of a number of departments, particularly the Ministry of Works.

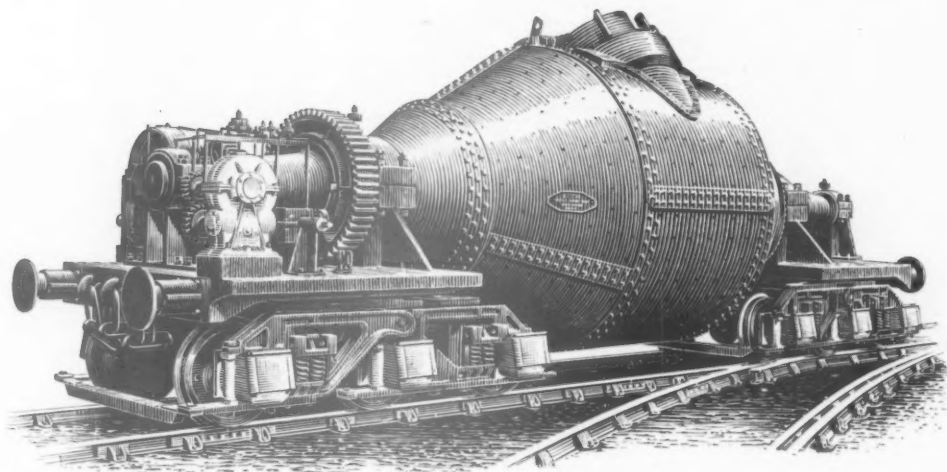
During the past year, before and since the transfer on the 1st April, 1950, many useful contributions have been made both on the general quantitative appreciation of the productivity problem and into the use of new and improved building tools.

For example, an analysis has been made, prior to the transfer, of the data obtained in a pilot survey carried out in 1949 on 160 completed house contracts with the object of determining changes which had occurred in productivity in house building in recent years. Three factors were found to be foremost in affecting the man-hours needed to build a 3 bed-roomed local authority house. These were the size of contract, the effect of incentive schemes and the general improvement in the supply of labour and materials. The results also suggested that sub-contracting might have some effect and a further survey has been begun to provide information on the influence of sub-contracting on both productivity and the cost of house building.

Another example of important work carried out before the transfer to the Building Research Station is the analysis, based on observations of over 800 houses, of the cost of concreting house foundations and ground floors. This showed that by mechanizing the operation it would be possible to effect a saving of about 50 per cent. in this cost and at the same time to increase the output of the concrete mixing machines by about 30 per cent.

There are some areas of the country where, if existing amenities are to be preserved or local industries maintained, it is very desirable that the tradition of building houses in stone should be continued. Stone building is, however, hampered by high costs compared with brick or other materials.

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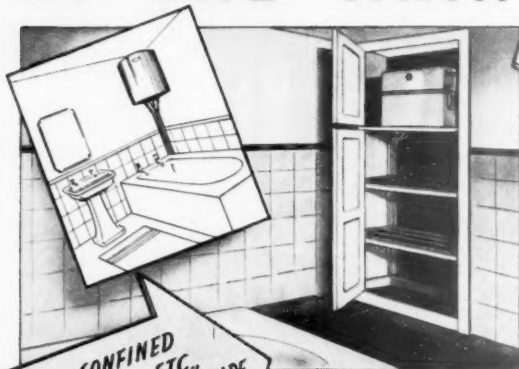
proud of their work and of the reputation for engineering skill and craftsmanship which they have inherited from their grandfathers and great-grandfathers. For Newton Chambers men have been working in iron since 1793.

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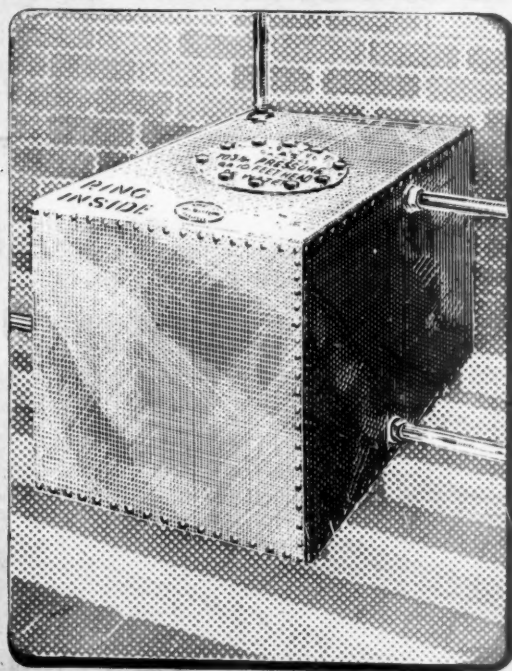
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M.O.W. REPORT ON MODERN METHODS OF PLUMBING AND DRAINAGE

THE report on modern methods of plumbing and drainage relates the observations made on this subject by the Anglo American Productivity Team to current practice in the United Kingdom.

The report, prepared by an ad-hoc committee of the M.O.W., has been approved by the National Consultative Council. It is the Committee's considered view that while technical knowledge in Great Britain is in no way behind that of the United States, up-to-date knowledge is not sufficiently widespread and there is a considerable field in this country for the extension of modern plumbing practice and for important changes in design, inspection and approval.

A feature of American practice which the Committee feels is of outstanding importance is the completion of fully detailed schemes of plumbing and drainage as part of the main design of any building before tenders are invited. In this country it is too often the practice for plumbing details and even sometimes complete designs to be left undetermined before the contractor submits his tender, with the result that the contract may be awarded to the firm which prepared the cheapest design rather than to the most efficient contractor. It is in design that the greatest contributions can be made to efficient and economical layout and architects may well find that the employment of qualified designers with specialized knowledge at an early stage will often enable provision to be made to include the latest developments in layout and technique. It is obvious that competing tenders should all be related to the same design.

In designing layouts for water supply and drainage for buildings, the main objectives subject to efficient performance and hygiene are economy in layout and installation, adequate protection against frost and economy in maintenance costs.

The relative simplicity of American layouts for water supply is partly due to the general absence of cold water storage cisterns. The practice of connecting all cold water outlets direct to the mains is economical in installation costs inside buildings and provides clean water at all draw-off points. The system relies, however, on ample water-resources and maintenance of working pressure through public mains of adequate size. It requires pipes and fittings able to withstand mains pressure and in certain circumstances special arrangements to offset the risk of contamination of the mains water from back syphonage. In this country there are areas in which water supply conditions are difficult and existing pumping plant and distribution mains are limiting factors. Storage cisterns serve to even out individual supplies over periods of high and low demand. They provide constant pressure head for efficient operation of ball valves and mixing valves, and a reserve in the event of damage or alterations to mains. It is, in any case, considered important to provide cold water storage cisterns to feed hot water systems, for by permitting the use of an expansion pipe this is safer than the American practice.

There are many districts in the United Kingdom where cold water storage cisterns are installed to feed hot water tanks only, all other cold water outlets being connected to the mains direct. The Committee considers that this system can offer some advantages in both simplicity and cost of installation. It recommends, therefore, that the possibility of using it should be carefully examined for all new towns and wherever new water schemes are being installed or old systems substantially extended. In assessing relative expenditure it is, of course, necessary to take into account the cost of suitable sizing of mains and of the provision of adequate working pressure.

Economical Layout of Plumbing

There are many features of efficient, economical design, which though known and practised in this country, should be much more widely adopted. The general principles are close grouping of appliances, both in plan and in the vertical plane, to give short pipe runs, the use of simple joints, adequate space for all pipe work and components and easy access for maintenance. The planning of details requires careful attention.

Drainage above Ground

Design considerations are equally important in the layout of drainage schemes both above and below ground. American practice features the use of the one-pipe system of soil and waste disposal and though this system has been adopted for many large buildings in this country it merits greater attention than it has so far received. In particular, further efforts should be made to adapt it economically to small houses. As a practical measure to encourage the wider use of the system the Committee recommends the early preparation by the British Standards Institution of British Standard Specifications for a wider range of suitable multi-branch fittings.

Drainage below Ground

There are means of effecting economies in underground drainage layout which are practised in this country, but there is scope for their much wider adoption. The main principles are to use pipes of the most suitable dimensions, i.e. no longer and no smaller than is necessary, to reduce the number of manholes to a minimum; to eliminate intercepting traps from connections to new sewerage systems and to ensure that the amount of concrete under and around pipes is not excessive. Efficient planning of a drainage layout on these lines is largely dependent on the architectural planning of the building itself and on the local systems of sewerage to which the scheme is to be connected. These considerations will affect the length of the drains and the number of manholes required, and it is therefore important to study the drainage layouts in relation to the buildings at the earliest stage of design. The services of specialized designers may often be employed with advantage.

Bye-laws and the Public Health Act

There is nothing in the model bye-laws either for building or for water supply nor in the Public Health Act, to prevent the adoption of all the latest developments. The Committee recognizes the importance of local conditions and of local experience in meeting them but it is convinced that there is scope for important economies in the more general adoption of up-to-date principles. It recommends that Local Authorities should take this into consideration in framing their requirements.

Part Pre-fabrication on Site

A matter which deserves further develop-

ment is the prefabrication of parts of plumbing systems in workshops set up on the site itself and the provision of specialized hand or power operated equipment for this work.

Approval and Inspection

The Committee wishes to draw particular attention to the high standard of inspection which is a feature of American practice. In this country installations are inspected and passed on completion by the Building Inspector or, in some areas, by the Sanitary Inspector. The Committee is advised that the Building Inspector's examination of the Institution of Municipal Engineers, the Sanitary Inspectors' examination of the Royal Sanitary Institute and the Sanitary Inspectors' Examination Joint Board, and the examination of the R.S.I. in General Hygiene and Sanitation do not include plumbing and drainage work to an extent sufficient to ensure that successful candidates possess specialist qualifications covering the whole range of work in this field. It therefore recommends that these two bodies should be invited to consider the desirability of making appropriate provision in the syllabus and/or the conditions of their examinations or by establishing a new examination in consultation with the plumbing trade to secure this end.

Published Information

Many of the difficulties described could be overcome or considerably eased if everyone responsible for plumbing and drainage installations and for approval of plans could be more fully informed of the merits of modern developments and of the conditions in which they can be economically applied to present day building. The information available in Post-War Building Studies No. 4 "plumbing" and No. 26 "Domestic Drainage" and in certain British Standard Codes of Practice has done much to clarify points of efficient practice. These documents, however, have had to cover a wide field and could not, therefore, provide the detailed advice and the illustrations of modern developments that are clearly needed.

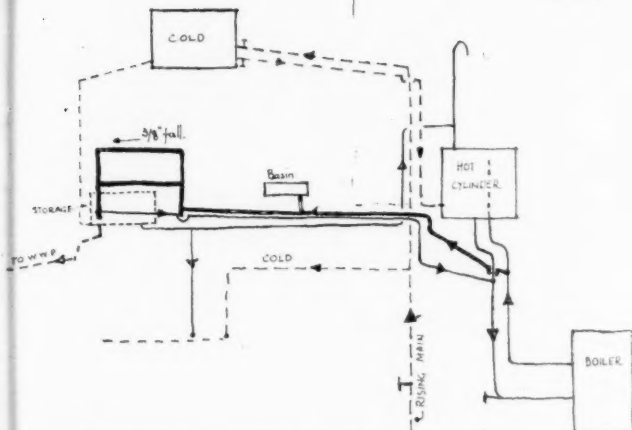
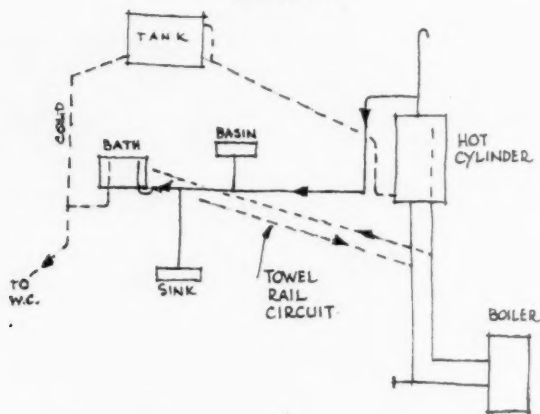
The Committee therefore welcomes the decision of the Building Research Station of the Department of Scientific and Industrial Research to undertake the preparation of a new document on the lines required.



Probably one of the largest pieces of stoneware to be made, this channel junction of 27 in. diameter with branches the same size has recently been made in the works of Thomas Wragg & Sons, Ltd. The junction was made up of machine-made pieces and measures about 6 ft. x 5 ft.

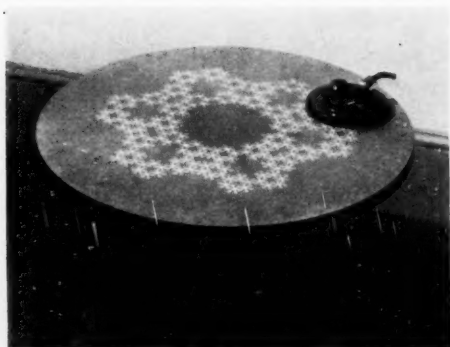
CORRESPONDENCE

CORRECTION

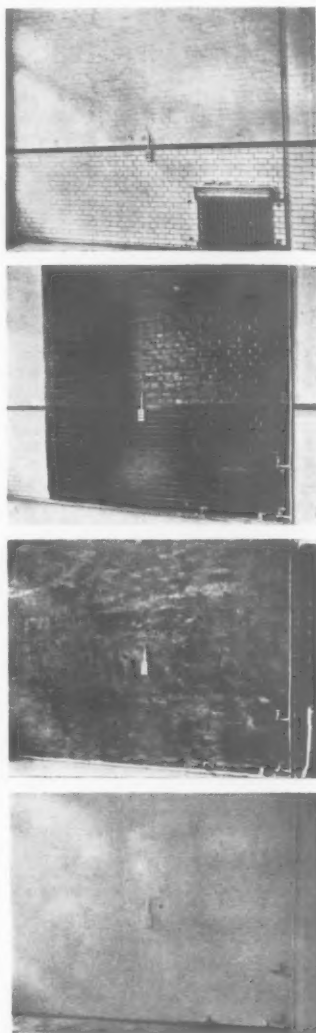


In the A. & B. N. of March 9 the lower of the two drawings above was reproduced to illustrate a letter from Mr. Levi. This drawing was incorrect. The correct diagram is published at the top of the page.

MORE CRYSTAL STRUCTURE PATTERN



Left is a plastic table top in "Warerite" incorporating a pattern based on a crystal structure diagram. Messrs. Warerite Ltd., are members of the Festival Pattern Group organized by the Council of Industrial Design.



Work has recently been carried out at Whittington Hospital, St. Mary's Wing, Highgate, by Mr. C. D. Andrews, F.R.I.B.A., who was asked to provide a plaster finish to old painted brick walls with glazed tile dados, in such a way as not to interfere with the architraves, skirtings, engineering services, etc.

First, the walls were well washed down to remove any loose particles, dust, etc., and one coat of a coal by-product water-proofer was applied. After a few hours had been allowed for this coat to set, a second coat was brushed on, and was heavily blinded with granite dust some twenty minutes later, while it was still tacky. Then, after another interval of twelve hours or so, a plaster finish of $\frac{3}{4}$ in. Sirapite completed the operation. (See above.)

Architects or authorities who may be interested in work of this nature have been invited by the National Coal Board to make enquiries to the By-Products Department, National Provincial Bank Buildings, Cardiff Docks.

Notes below give basic data of contracts open under locality and authority which are in bold type. References indicate: (a) type of work, (b) address for application. Where no town is stated in the

CONTRACT • NEWS •

address it is the same as the locality given in the heading, (c) deposit, (d) last date for application, (e) last date and time for submission of tenders. Full details of contracts marked * are given in the advertisement section.

OPEN

BUILDING

BEDDINGTON AND WALLINGTON B.C. (a) 28 bungalows, Richmond Road. (b) Borough Engineer, Town Hall, Wallington. (d) Apr. 23.

BEDFORDSHIRE C.C. (a) 4 classroom extension at Evelyn Road C.P. School, Dunstable. (b) County Architect, Shire Hall, Bedford. (d) Apr. 18.

BEXLEY B.C. (a) Alterations and additions to mortuary. (b) Borough Engineer, West Lodge, Broadway, Bexleyheath. (c) 2 Gns. (e) May 1.

BOURNEMOUTH B.C. (a) Adaptations and extensions to "Kingsholme" to provide an old people's hostel. (b) Borough Architect, Room 101, Town Hall. (c) 3 Gns. (e) Apr. 30.

BRIDGWATER B.C. (a) 54 houses, Montacute's Field site. (b) Borough Engineer, Town Hall. (c) 3 Gns. (e) Apr. 23.

CARDIFF R.C. (a) 6 houses, Leckwith. (b) Engineer and Surveyor, 20 Park Place. (c) 5 Gns. (e) Apr. 21.

CHESTERFIELD R.C. (a) Extension to Cleansing Depot garage at Locko Brook, Pilsley. (b) Council's Engineer, Rural Council House, Saltergate. (c) 2 Gns. (e) Apr. 26.

DOCKING R.C. (a) 2 blocks of 4 houses and 4 pairs of houses at Snettisham, and block of 4 houses at Brancaster, Staithe. (b) Housing Officer, Council Offices. (c) 2 Gns. (e) Apr. 24.

DURHAM C.C. (a) Pair of police houses, with office, and a pair of houses, at Barmoor Crawbrook. (b) County Architect, Court Lane. (e) Apr. 21.

GILLINGHAM B.C. (a) Pair of flats, Macdonald Road, block of 6 flats off Milburn Road. (b) Borough Engineer, Municipal Buildings. (c) 5 Gns. (d) Apr. 24.

HEMEL HEMPSTEAD R.C. (a) 2 blocks of 4 Duplex flats at Nunfield. (b) Engineer and Surveyor, Council Offices, 2 Marlowes. (c) 2 Gns. (e) Apr. 23.

HEREFORDSHIRE C.C. (a) Magistrates' court and police station at Ledbury. (b) County Architect, Bath Street, Hereford. (c) 3 Gns. (d) Apr. 16.

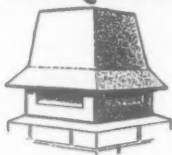
KNIGHTON U.C. (a) 6 houses. Offa's Road site. (b) Council's Clerk, Town Hall. (c) 4 Gns. (e) Apr. 25.

LIVERPOOL REGIONAL HOSPITAL BOARD. (a) Alterations to 78 Rodney Street, Liverpool, 1, to form laboratories for Liverpool Rad'm Institute. (b) Regional Architect, Alder Hey Hospital, Eaton Road. (c) 2 Gns. (e) May 2.

LONDON-EALING B.C. (a) 2 blocks of 12 three-storey flats at Northolt Grange. (b) Borough Engineer, Town Hall, W.S. (c) £2. (e) Apr. 26.

LONDON-TOTTENHAM B.C. (a) 8 old persons' flats and 20 old persons' flats, Cornwall Road Estate. (b) Borough Engineer, Town Hall, N.15. (c) 2 Gns. (d) Apr. 27.

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***MACCLESFIELD B.C.** (a) 72 houses at Weston. (b) Borough Architect, 3 Jordangate. (c) 2 Gns. (e) Apr. 25. See page 37.

MONMOUTHSHIRE C.C. (a) Alterations to dairy block and cow-houses at County Agricultural College, Usk. (b) County Architect, Queen's Hill, Newport. (c) 3 Gns. (e) May 1.

NEWCASTLE-UPON-TYNE C.C. (a) 87 houses and flats, Fairways Estate. (b) City Architect, 18 Cloth Market. (c) Apr. 26.

N. IRELAND—BELFAST C.C. (a) 202 flats, Annadale Embankment Estate. (b) Housing Architect, 94 Chichester Street. (c) £5. (e) Apr. 26.

OSSETT B.C. (a) 10 houses, Radley Street. (b) Borough Surveyor, Town Hall. (c) 2 Gns. (e) Apr. 23.

ROCHDALE B.C. (a) Adaptation of Brooklands, to form home for aged persons. (b) Borough Surveyor, Town Hall. (c) Apr. 23.

ST. ALBANS C.C. (a) Public conveniences at Clarence Park. (b) City Engineer, 16 St. Peter's Street. (c) 2 Gns. (e) May 1.

SCOTLAND—MIDLOTHIAN C.C. (a) 8 houses, Linmellie, West Calder. (b) County Architect, 32 Palmerston Place, Edinburgh, 12. All or separate trades.

***SHERBORNE R.D.C.** (a) 6 houses. (b) Ivor Sartin, Clerk of the Council, Council Offices, Greenhill. (c) 2 Gns. (e) Apr. 23. See page 37.

SOUTHAMPTON HARBOUR BOARD. (a) Works for new two-storey warehouse at Town Quay, comprising steel building frame; prestressed concrete frame; brickwork; timber doors and gear; steel windows; asphalt roofing. (b) Board's Engineer, Harbour Offices, Town Quay. (d) Apr. 20.

SOUTHPORT B.C. (a) Erection and completion of extensions to Southport Technical College. (b) Education Officer, Pavilion Buildings, Lord Street. (c) May 7.

STAINES U.C. (a) 81 houses, Kingston Road, Laleham. (b) Engineer and Surveyor, Shortwood House, 240 London Road. (c) 5 Gns. (e) Apr. 25.

STEVENAGE DEVELOPMENT CORPORATION. (a) 2 pairs of houses in Julians Road and Grove Road. (b) Chief Architect, Aston House, Aston. (c) 2 Gns. (e) Apr. 30.

SURBITON B.C. (a) 46 houses, Fullers Way Estate. (b) Town Clerk, Council Offices. (d) Apr. 21, with details of similar works carried out.

TONBRIDGE R.C. (a) 10 houses, Langton Green; 14 houses, 8 flats, Paddock Wood; 8 houses, Pembury; 6 flats, Horsmonden; construction of road, etc., at Langton Green and Paddock Wood. (b) Engineer and Surveyor, 48 Pembury Road. (c) Apr. 23.

WALTON AND WEYBRIDGE U.C. (a) Conversion of River House into 4 flats. (b) Engineer and Surveyor, Council Offices, Walton-on-Thames. (c) Apr. 23.

WARE U.C. (a) 8 bungalows, Wadesmill Road, and 2 bungalows at Bowling Road. (b) Engineer and Surveyor, The Priory. (c) 2 Gns. (e) Apr. 21.

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WIDNES B.C. (a) New Office block, work-shops and stores, Catherine Street. (b) Borough Architect, Brendan House, Widnes Road. (c) 1 Gn. (e) May 2.

WIMBORNE AND CRANBORNE R.C. (a) 8 houses at Cowgrove and 7 at All Saints. (b) Messrs. Crickmay & Sons, 7 Church Street, Wimborne. (c) 2 Gns. each site. (e) Apr. 21.

WIVENHOE U.C. (a) Block of 6 houses and 2 pairs of houses at The Avenue Estate. (b) Council's Clerk, Council Offices. (c) 2 Gns. each contract. (d) Apr. 14.

PLACED

Notes on contracts placed state locality and authority in bold type with (1) type of work, (2) site, (3) name of contractor and address, (4) amount of tender or estimate. † denotes that work may not start pending final acceptance, or obtaining of licence, or modification of tenders, etc.

BUILDING

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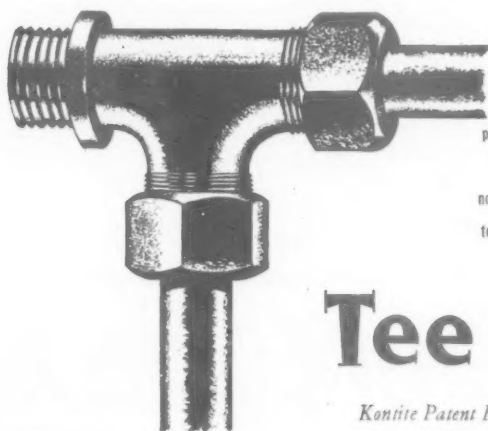
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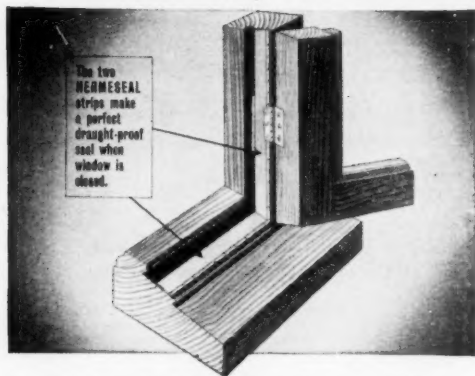
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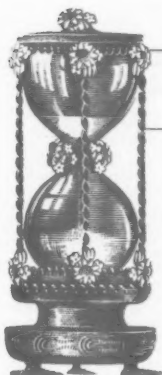
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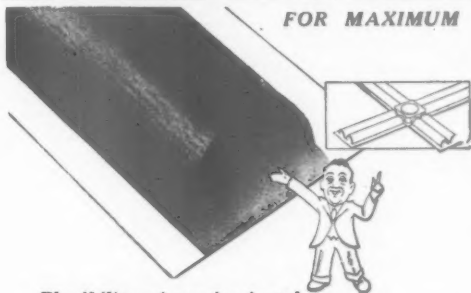
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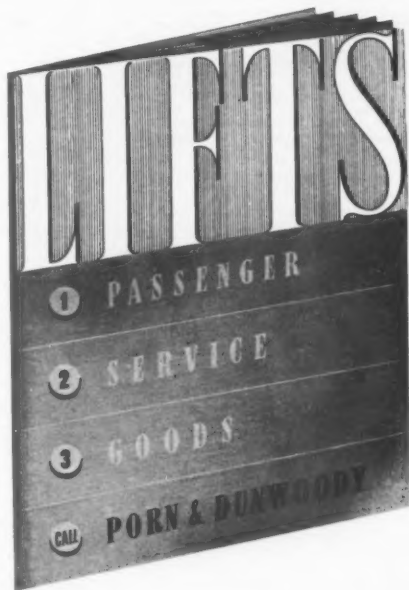
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APPOINTMENTS

LONDON COUNTY COUNCIL.

APPLICATIONS are invited for positions of ARCHITECTURAL ASSISTANT (salaries up to £580 a year) in the Housing and Valuation Department. Commencing salaries will be determined according to qualifications and experience. Engagement will be subject to the Local Government Superannuation Act, and successful candidates will be eligible for consideration for appointment to the permanent staff on the occurrence of vacancies.

Successful candidates will be required to assist in the design, layout and preparation of working drawings for housing schemes (cottages and multi-story flats) and will be employed in the Housing Architect's Division.

Forms of application may be obtained from the Director of Housing, The County Hall, Westminster Bridge, S.E.1 (stamped addressed envelope required and quote reference A.A.1). Canvassing disqualified. (816). [1011]

ABERDEEN HARBOUR COMMISSIONERS.

HARBOUR ENGINEER'S DEPARTMENT.

APPLICATIONS are invited for the post of ARCHITECTURAL ASSISTANT in the Harbour Engineer's Office, Aberdeen.

Applicants should be under 40 years of age, with experience in structural steelwork, reinforced concrete and general building design and construction. Preference will be given to candidates with some experience of property procedure and the preparation of reports. The salary, £395-£570 according to qualifications, rising by annual increments of £15. The appointment is subject to the Commissioners' Superannuation Scheme and the candidate selected will require to pass a medical examination before appointment.

Applications, stating age and qualifications, with full details of experience, together with copies of recent testimonials, should be lodged with the Harbour Engineer, 15 Regent Quay, Aberdeen, not later than 30th April, 1951.

Harbour Engineer's Office, Aberdeen.

31st March, 1951.

[5340]

BRACKNELL DEVELOPMENT CORPORATION

INVITES applications from suitably qualified persons for the following appointment:—

ARCHITECT (Housing). Salary £550 a £40 - £750. Applicants should be Corporate Members of the R.I.B.A. and an additional town planning qualification will be an advantage. Students of a recognised School of Architecture who have exceptional ability but lack practical experience and are due to qualify in June, will be considered for this appointment.

The successful applicant will be engaged on the design and construction of large housing layouts, and will work under the direction of Mr. E. A. Ferryby, B.Arch., A.R.I.B.A., A.M.T.P.I. Chief Architect to the Corporation.

The post will be superannuable under the Local Government Superannuation Act, 1937, and the successful candidate will be required to pass a medical examination.

Candidates are required to state if they are to their knowledge related to any member of the Corporation or Staff.

Applications, giving full particulars of the candidate's age, qualifications and experience, together with the names of two persons to whom reference can be made, must reach the General Manager, Bracknell Development Corporation, Farley Hall, Bindfield, Bracknell, Berks, on or before 30th April, 1951, marking envelope "Architect." [5338]

MINISTRY OF WORKS.

THERE are vacancies in the Chief Architect's Division for ARCHITECTURAL ASSISTANTS and LEADING ARCHITECTURAL ASSISTANTS with recognised training and fair experience. Successful candidates will be employed in London and elsewhere on a wide variety of Public Buildings, including Atomic Energy and other Research Establishments, Telephone Exchanges and Housing.

Salary: Architectural Assistants £300-£525 per annum; Leading Architectural Assistants £500-£625 per annum. Starting pay will be assessed according to age, qualifications and experience. These rates are for London; a small deduction is made in the Provinces.

Although these are not established posts, some of them have long term possibilities and competitions are held periodically to fill established vacancies.

Apply in writing, stating age, nationality, full details of experience, and locality preference, to Chief Architect, Ministry of Works, Abell House, John Islip Street, London, S.W.1, quoting reference WG10/BC. [5326]

LONDON COUNTY COUNCIL.

ARCHITECT'S DEPARTMENT.

APPLICATIONS are invited for positions of ARCHITECT, Grade III (£550-£700) and TECHNICAL ASSISTANT (up to £580) for work on new housing schools and other public buildings. The positions are superannuable. Candidates for Grade III positions should possess professional qualifications.—Application forms from the Architect (AR/P.5), The County Hall, Westminster Bridge, S.E.1, enclosing stamped addressed foolscap envelope. Canvassing disqualified. (384). [1097]

AIR MINISTRY have vacancies for DESIGNER/DRAUGHTSMEN in the Design Branch of the Works Department in the following fields: Architecture, Drainage and Water Supply, Land Survey. Vacancies are mainly in London but there are some in the provinces. If desired, consideration would be given to making appointments for London only. Salaries are on ranges up to £625 with starting pay in accordance with age and qualifications.—Applications, stating age, qualifications, previous appointments (with dates), should be sent to Air Ministry (S.2.H), Cornwall House, London, S.E.1, from which address further details may also be obtained. [5275]

NEW ZEALAND.

DEPUTY GOVERNMENT ARCHITECT.

APPLICATIONS are invited for the position of DEPUTY GOVERNMENT ARCHITECT at a salary up to £1,650 N.Z. per annum. This salary is at present being reviewed and it is possible that a substantial increase may be granted.

The appointee must be competent to succeed the Government Architect within a year.

The Government Architect is responsible for the design, construction and maintenance of a large range of public buildings such as schools, hospitals and offices, and controls an organisation employing a professional and technical staff of over 600, located in various places throughout New Zealand. Applicants must be Fellows or Associates of the R.I.B.A. and have administrative ability and experience.

The appointment is to the permanent staff of the New Zealand Public Service and full conditions, together with application forms may be obtained from: The High Commissioner for New Zealand, 415 The Strand, London, W.C.2, with whom completed applications, in duplicate, should be lodged not later than 22nd April, 1951. [5344]

THE SOUTH WALES ELECTRICITY BOARD.

APPLICATIONS are invited for the position of an ARCHITECTURAL DRAUGHTSMAN in the Civil Engineering Department of the Board at St. Mellons, near Cardiff.

Applicants will be required to undertake the layout and preparation of working drawings for show-room offices and substations, including measuring up and alterations to existing buildings.

The salary for the position will be in accordance with the scale £390 per annum rising by annual increments to £450 per annum.

Applications, stating age, present position, present salary, qualifications and experience, together with the names and addresses of three referees, should be addressed to the Secretary (Establishments Section), The South Wales Electricity Board, St. Mellons, Nr. Cardiff, so as to reach him not later than 21st April, 1951.

D. G. DODDS, Secretary. [5354]

SUDAN GOVERNMENT.

THE Public Works Department requires an ARCHITECTURAL ASSISTANT, aged 24 to 36, for service in the Sudan. The duties consist of the preparation of working drawings for general building work.

Candidates must have a sound architectural training and experience of general building works, and be capable of the preparation of working drawings required.

Appointment will be on probation for Short Term Contract for a period of two years, with or without bonus as may be agreed.

Salary for Short Term Contract (with bonus) ranges from £E.593 to £E.860, and for Short Term Contract without bonus from £E.632 to £E.917. Starting rate will be determined according to age, qualifications and experience.

Cost of Living Allowance varying between £E.142 and £E.352 per annum according to the number of dependents is presently payable and subject to certain limitations, an Oudt Allowance of £E.40 is payable on appointment. There is at present no Income Tax in the Sudan. Free passage on appointment.

Full particulars and application form may be obtained on written application to Sudan Agent in London, Wellington House, Buckingham Gate, London, S.W.1. Please mark envelopes "Architectural Assistant—4/140A." [5345]

CITY AND COUNTY OF BRISTOL.

CITY ARCHITECT'S DEPARTMENT.

APPOINTMENT OF SENIOR ASSISTANT ARCHITECT—GRADE VIII (£685 a £25 - £760 p.a.).

APPLICATIONS are invited from qualified Architects for the above appointment.

Candidates must be Associate Members of the R.I.B.A. or hold equivalent qualification with considerable experience, particularly in housing, and the control of a number of senior and junior architectural staff. Experience in Local Authority office work will be an advantage.

The appointment is subject to the provisions of the Local Government Superannuation Acts, 1937 and 1939, and successful applicants required to pass medical examination. The appointment is terminable by one month's notice in writing on either side.

Housing accommodation provided, if necessary, at an economic rent.

Applications, stating age, full details of training, qualifications and experience, present appointment and period held and salary, together with the names of three referees, must be delivered to the undersigned by Friday, the 20th April, 1951.

J. NELSON MEREDITH, F.R.I.B.A., City Architect.

Eagle House, Colston Avenue, Bristol, 1.

3rd April, 1951.

[5346]

CITY BOROUGH OF GREAT YARMOUTH.

APPOINTMENT OF ASSISTANT ARCHITECTS.

APPLICATIONS are invited for the following appointments in the Borough Engineer's Department:—

(a) CHIEF ASSISTANT ARCHITECT. Salary A.P.T. Grade VIII (£685-£760).

(b) SENIOR ASSISTANT ARCHITECT. Salary A.P.T. Grade VII (£635-£710).

Candidates for these appointments should be Associates of the Royal Institute of British Architects. The appointments will be terminable by one month's notice on either side, subject to the provisions of the Local Government Superannuation Act, 1937, and to the passing of a medical examination. Housing accommodation will be offered to the successful applicants if married.

Applications, stating age, qualifications and experience, together with the names of three persons to whom reference could be made, should be enclosed in an envelope endorsed with the title of the appointment, and must be received by me not later than Friday, 27th April, 1951. Canvassing will be deemed a disqualification, and candidates must disclose in writing any relationship to any member or holder of any senior office under the Council. Candidates who fail to do so will be disqualified and, if appointed, will be liable to dismissal without notice.

FARRA CONWAY, Town Clerk.

Town Hall, Great Yarmouth.

4th April, 1951.

[5347]

BOROUGH OF WORTHING.**BOROUGH ENGINEER'S DEPARTMENT.****ARCHITECTURAL STAFF.**

APPPLICATIONS are invited for the following appointments in the Architectural Section of the Borough Engineer's Department:—

(a) **TWO ARCHITECTURAL ASSISTANTS.** Grade A.P.T. IV (£480-£525). Applicants should be suitably qualified, having passed at least the Intermediate examination of the R.I.B.A., and have had experience in the design and preparation of working drawings for work carried out by Local Authorities, including school buildings.

(b) **ONE DRAUGHTSMAN.** General Grade (£135-£385 according to age). Applicants should be neat, expeditious and accurate architectural draughtsmen.

(c) **ONE ASSISTANT QUANTITY SURVEYOR.** Grade A.P.T. IV (£480-£525). Applicants should have passed the Intermediate examination of the R.I.C.S. Sub-section III, and must be capable of and have had experience in abstracting and billing and measurement of works on site. Experience in "taking off" would be an advantage.

All the appointments are subject to the National Scheme of Conditions of Service of Local Government Officers, to the Local Government Superannuation Act, 1937, and to the successful applicants passing satisfactorily a medical examination.

Applications, endorsed respectively "Architectural Assistant," "Draughtsman" or "Assistant Quantity Surveyor," as the case may be, stating age, status, qualifications, experience, present and past appointments with dates, and accompanied by at least two copies of testimonials, should be sent to the Borough Engineer and Surveyor, Town Hall, Worthing, so as to reach him not later than Friday, 20th April, 1951.

ERNEST G. TOWNSEND, Town Clerk.
Town Hall, Worthing. [5348]

DEVON COUNTY COUNCIL.**COUNTY ARCHITECT'S DEPARTMENT.**

APPPLICATIONS are invited for the undermentioned appointments on the permanent staff. Conditions of Service and salaries are in accordance with the National Joint Council Scheme for Local Authorities.

ASSISTANT ARCHITECTS.

Grade A.P.T. V. (£520-£570 per annum).
Grade A.P.T. III. (£450-£495 per annum).
Grade A.P.T. I. (£390-£435 per annum).
Drawing Office Junior, General Division (salary according to age and experience).

The appointments are subject to the provisions of the Local Government Superannuation Act, 1937, and the successful candidates will be required to pass a medical examination.

A weekly allowance of 25s. and return fare home every two months will be paid, for a period not exceeding six months, to the successful candidates, if married, if they have to maintain a family in another home away from Exeter.

Application forms, with full particulars of qualifications and experience required for the various posts, may be obtained from the County Architect, 97 Heavitree Road, Exeter, and must be returned to him by Saturday, the 28th April, 1951.

H. A. DAVIS, Clerk of the County Council.
The Castle, Exeter.
5th April, 1951. [5349]

**BOROUGH OF WALTHAMSTOW
COMMITTEE FOR EDUCATION.**

APPPLICATIONS are invited for the following permanent appointment in the office of the Architect to the Committee, Mr. Frank H. Heaven, A.R.I.B.A., A.R.I.C.S.

CHIEF ASSISTANT ARCHITECT at a salary of £685, rising by increments of £25 to £760 per annum, plus £30 London Weighting (Grade A.P.T. VIII of National Scales).

Applicants must have had considerable experience in an Architect's office in connection with the design, construction and maintenance of educational or similar buildings, and some administrative experience.

Forms of application may be obtained from and should be returned to the undersigned within three weeks of the appearance of this notice.

E. T. POTTER, Borough Education Officer.
Education Offices,
Town Hall, Forest Road, Walthamstow. E.17
[5353]

**COUNTY LONDONDERRY EDUCATION
COMMITTEE.**

VACANCIES exist for **ARCHITECTURAL ASSISTANTS** in the Architect's Department. Salary in accordance with experience. Application forms may be obtained from the undersigned at the Education Office, New Row, Coleraine, Co. Londonderry, and completed forms must be returned within 15 days from the date of this insertion.

R. B. HUNTER, Director of Education.
[5357]

CITY OF BIRMINGHAM.**PUBLIC WORKS DEPARTMENT.**

APPPLICATIONS are invited for the post of **QUANTITY SURVEYOR**, Grade A.P.T. VI—£595/£660 per annum.

Applicants must be Associate Members of the Royal Institution of Chartered Surveyors (Quantity Section) and have had considerable experience and be competent to "take off" and prepare Bills of Quantities for all classes of buildings.

Applicants need not have had previous Local Government experience.

The salary is in accordance with the National Scale of Salaries and the commencing salary will be fixed at an incremental point within the Grade according to the qualifications and experience of the candidates appointed.

The appointment may be terminable by one month's notice on either side.

The successful applicant will be required to undergo a medical examination by the Corporation doctor and the appointment is subject to the provision of the Local Government Superannuation Act, 1937.

Applications, endorsed "Quantity Surveyor" stating qualifications and experience together with the names and addresses of two persons to whom reference can be made, should reach the undersigned not later than the 30th April, 1951.

Canvassing, either directly or indirectly, will disqualify.

HERBERT J. MANZONI,
City Engineer and Surveyor.
The Civic Centre, Birmingham, 1. [5350]

CITY OF BIRMINGHAM.**PUBLIC WORKS DEPARTMENT.**

APPPLICATIONS are invited for the posts of **SENIOR ARCHITECTURAL ASSISTANTS** (General). Grade A.P.T. VIII—£685/£760.

Applicants must be Associates of the R.I.B.A. and continued membership is a condition of appointment.

Applicants need not have had Local Government experience.

Housing accommodation is available to the successful applicants.

The salary scale is in accordance with that laid down under the National Scale of Salaries and the commencing salary will be fixed at an incremental point within the Grade according to the qualifications and experience of the candidates appointed.

The appointments may be terminable by one month's notice on either side.

Applicants will be required to undergo a medical examination by a Corporation doctor and the appointments will be subject to the provisions of the Local Government Superannuation Act, 1937.

Applications, endorsed "Senior Architectural Assistant," stating qualifications and experience, together with the names and addresses of two persons to whom reference can be made, should reach the undersigned not later than the 30th April, 1951.

HERBERT J. MANZONI,
City Engineer and Surveyor.
The Civic Centre, Birmingham, 1. [5351]

CONTRACTS**SHERBORNE RURAL DISTRICT COUNCIL.
HOUSING TENDER.**

TENDERS are invited for the erection of Six Prefabricated "Woolaway" Houses at Alwinton.

General Conditions of the Contract, Bills of Quantity and Form of Tender may be obtained from the undersigned on receipt of a deposit of £2 2s., which will be refunded on the receipt of a bona-fide tender or the return of all documents. Drawings and site plans may be inspected at the Council Offices.

Tenders, in sealed envelopes, marked "Alwinton Housing," must be delivered to me not later than 12 noon on Monday, 23rd April, 1951.

The Council is not bound to accept the lowest or any tender.

IVOR SARTIN, Clerk of the Council.
Council Offices,
Greenhill, Sherborne, Dorset. [5352]

BOROUGH OF MACCLESFIELD.**SCHEME 6A—ERECTION OF 72 TRADITIONAL
HOUSES AT WESTON.**

TENDERS are invited for the erection of 72 TWO-BEDROOM HOUSES at WESTON, as follows:—

- (a) Two blocks of four houses.
- (b) Eight blocks of five houses.
- (c) Four blocks of six houses.

Bills of Quantities and Forms of Tender may be obtained from the Office of the Borough Architect, 3 Jordangate, Macclesfield, on payment of a deposit of £2 2s. 6d., which will be refunded on receipt of a bona-fide tender, or on return of all documents, unmarked, within seven days of their receipt by the depositor.

Tenders in plain sealed envelopes (which will be provided) are to be delivered to the office of the undersigned not later than 10 a.m. on Wednesday, 25th April, 1951. The Corporation does not undertake to accept the lowest or any tender.

WALTER ISAAC, Town Clerk.
Town Hall, Macclesfield.
11th April, 1951. [5356]

**ARCHITECTURAL APPOINTMENTS
VACANT**

ESTABLISHED London firm requires able Assistant, Permanent position. Interested contemporary architecture. Salary £500/£650.—Box 0790. The Architect and Building News. [5342]

ARCHITECTURAL Assistant required by Gollins, Melvin & Partners, capable working drawings. Salary £450/£550. Office experience essential. Five-day week.—Tel. Museum 0883 for appointment. [5341]

CLIFFORD Culpin & Partner require Assistant with office experience, to work in the first instance at Enfield, on work requiring a high standard of draughtsmanship. Salary £500 p.a. plus share of profits.—Phone HOL. 0163. [5355]

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STEEL framed, single story, Industrial Buildings for sale, complete with covering 184ft. x 188ft., 188ft. x 100ft., and 188ft. x 84ft.—Sharrman 5 Victoria Street, S.W.1. Abbey 5711/2. [5016]

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MODELS, Architectural and Industrial.—Inquire first of British Industrial Model Services Ltd., Regent Chambers, Westover Road, Bournemouth. [5305]

INSURANCE

ARCHITECTS' Indemnity Insurance effected.—Please write for Proposal Form to

E. J. SAXBY, Incorporated Insurance Broker,
17a Carfax, Horsham, Sussex Tel. 990. [5233]

PARTNERSHIP.

MAJORITY partnership offered in small established practice in the Channel Islands. Applications for further particulars should give details of qualifications, experience and bona-fides.—Box 0791, The Architect and Building News. [5343]

PLANNING: The Architects' Handbook. 6th Edition. "E. & O.E."

Gives essentials of plan types and the outlines of more important details which affect the design and planning of most types of current buildings. 111 in. x 8½ in. 487pp. 607 diagrams. 21s. net. By post 22s. Obtainable at all bookellers or by post from: Iliffe & Sons Ltd., Dorset House, Stamford Street, London, S.E.1.

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